Hamilton-Wentworth
Population Projections 1988-2006

Hamilton-Wentworth Planning and Development Department
Strategic Planning Division
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Errata

The 1988 population figures used in these projections represent the population enumerated in May, 1988. The year end population figures for the area municipalities and the Region are as follows:

Population by Area Municipality

	1988 Assessment Year End Report
Ancaster	20,404
Dundas	20,950
Flamborough	27,688
Glanbrook	9,494
Hamilton	309,679
Stoney Creek	45,908
REGION	434,123

Source: Ontario Ministry of Revenue, Assessment Division

Notes: The Hamilton total does not include an approximately 1,600 person undercount from McMaster University.

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EXECUTIVE SUMMARY

Purpose:

This report projects population and household growth for the Regional Municipality of Hamilton-Wentworth to the year 2006. Growth projections by age group and by area municipality are included to provide the detail necessary to plan for residential land, infrastructure and housing requirements, and for leisure, health, transit, educational, and other services. A range of growth scenarios are incorporated, in recognition of the uncertainties inherent in projecting future trends in fertility and migration.

Findings:

- *The population of Hamilton-Wentworth is projected to increase from 429,500 in 1988 to 483,000 in 2006 (12.5 percent), and the number of households is projected to increase from 161,100 in 1988 to 193,500 in 2006 (20.1 percent), under the "most likely" scenario.*

- *The "high migration" scenario projects a Regional population of 503,000 in 2006. This scenario is based upon an increase in the share of net international migration destined for Hamilton-Wentworth as a result of the availability of services appropriate to major immigrant groups. It also assumes an increase in the number of migrants from other regions in Ontario, encouraged by enhancements in infrastructure and services which improve the quality of life.*

- *The "low migration" scenario projects a Regional population of 452,000 in 2006. This scenario is based upon moderate levels of immigration to Canada. It also assumes large migration losses to other parts of Ontario.*

- *The rate of population growth declines over the projection period under all scenarios. Slower growth at the national, provincial, and regional levels will result as the number of women in the childbearing years declines with the aging of the baby boom, and as the proportion of elderly (who are exposed to higher mortality rates) increases.*

- *The number of children 0-14 years of age will increase by 6 percent between 1988 and 1996, then decline to approximately 1988 levels by 2006, under the most likely scenario. This decline will occur as women in the baby boom complete their reproductive cycle. In some municipalities, the facilities built to accommodate increasing numbers of children in the early part of the projections should be designed to accommodate potential conversion to alternative uses.*

- *A dramatic increase in the proportion of individuals aged 40 to 64 in Hamilton-Wentworth is projected, from 28 percent of the total population in 1988 to 36 percent in 2006. This increase will be accompanied by demands for particular leisure, health, educational and social services.*

- *Rapid growth will occur in the number of individuals over 80 years of age, increasing demand for services supportive of independent living for the elderly, and for a variety of institutional living options.*

- *The aging of the population will lead to further declines in average household size, from 2.7 in 1988 to 2.5 in 2006.*

- *A 57 percent increase in the number of households headed by individuals aged 45 to 59 is projected, compared to a 20 percent increase in all households.*

- *Municipalities projected to experience large increases in population between 1988 and 2006 under the "most likely" scenario are Ancaster (81 percent), Stoney Creek (43 percent), and Flamborough (39 percent).*

- *All muncipalities will experience an increase in the proportion of seniors (65+) and a decrease in the proportion of children (0-14) between 1988 and 2006, under the most likely scenario.*

Population Projections
Area Municipalities, 2006

	1988 Assessment	Low	Most Likely	High
Ancaster	19,700	27,800	35,800	39,200
Dundas	20,600	20,500	22,000	23,400
Flamborough	27,100	33,400	37,700	44,300
Glanbrook	9,500	10,400	11,800	12,800
Hamilton (1)	307,200	300,800	310,700	315,000
Stoney Creek	45,300	59,000	64,600	67,800
REGION	429,000	452,000	483,000	503,000

(1) Figures do not include population residing on campus at McMaster University.

Source: Ontario Ministry of Revenue, Assessment Division and The Hamilton-Wentworth Planning

Note: Numbers may not add to totals due to rounding.

Introduction

Population changes as a result of the rate of natural increase (or number of births over deaths) and the level of net migrants flowing into or out of an area. The rate of natural increase reflects fertility patterns, survival rates, and the age structure of a population. In recent years, the combination of low fertility rates, an aging population, and already high survival rates has led to a slowing in the rate of natural increase at the national, provincial, and regional levels. On the other hand, net migration reflects the attractiveness of an area as a destination for in-migrants and as a suitable long-term place of residency for the existing population. Migration rates, particularly at the provincial and regional levels, are volatile and are sensitive to economic and social conditions. These conditions include employment opportunities, availability and affordability of a range of housing alternatives, the range and accessibility of services, the availability of cultural, recreational, and physical amenities, and the existence of neighbourhoods appealing to personal preferences of potential migrants.

Future population growth will influence the magnitude of future demands on existing services and the nature of new service and infrastructure requirements. Population projections are a necessary component of studies conducted by Regional departments such as Planning, Health, Engineering, Economic Development and Finance. This report analyzes demographic trends affecting the Region and makes projections regarding future growth. Growth is projected using the technique of "cohort survival", calculating the size and age-sex composition of a future population based on particular sets of fertility, mortality, and migration assumptions.

Regional population projections were previously prepared in 1975 and 1981. The 1975 Report, "Population - Future Growth in the Hamilton-Wentworth Region" used the component method to project future population. (Results of that Report are included in Appendix B). The component method projects the annual number of births and deaths in a population and the annual number of net migrants into and out of an area, but does not incorporate the detailed age-sex characteristics of the population. A review of these projections was undertaken when it became evident that the rapid growth projected was not occurring.

The 1981 Review used the cohort survival method to project future population. The cohort survival method is more sophisticated than the component method because it includes information on the age-sex structure of the base population and requires age-specific fertility, mortality, and migration assumptions. Age-specific information allows for more detailed output and makes it possible to incorporate the effects the changing age structure of the Regional population will have on growth. The assumptions and results of the 1981 projections are evaluated throughout this report in light of the most current population, fertility, mortality and migration information available.

The current Report on Population and Demographics projects population and household growth to the year 2006. Section One of the report documents historic population growth in Hamilton-Wentworth, the emerging age-sex structure, and the social, economic, and institutional factors which will affect future growth through their impact upon fertility and mortality rates and migration flows. Section Two projects future household and population growth at the regional and area municipal levels, including an examination of the implications of the changing size of various age cohorts. The appendices provide more detailed summaries of assumptions, reference reports, and age specific projections.

Section One: Background

1.1 Population Growth

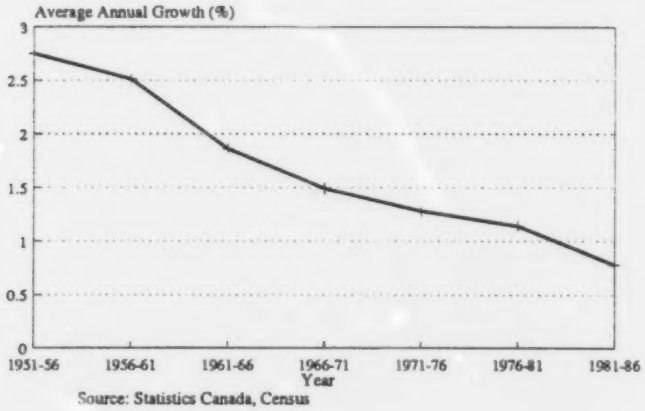
Canada

In 1986, the population of Canada was 25,309,300, an increase of 967,600 people, or 4.0 percent since 1981. This increase represents an average annual rate of population growth of 0.8 percent. The rate of growth of the Canadian population has decreased steadily since the 2.8 percent average annual growth recorded between 1951 and 1956.

In 1984, Statistics Canada prepared a set of population projections which indicated that if the declining fertility and mortality rates and low levels of net international migration experienced in the early 1980s were to continue, then the rate of growth of the Canadian population would fall to "near-zero" by 2006 (Statistics Canada, 1984).

Graph 1.a

Population Growth Rate
Canada, 1951-1986



Source: Statistics Canada, Census

Ontario

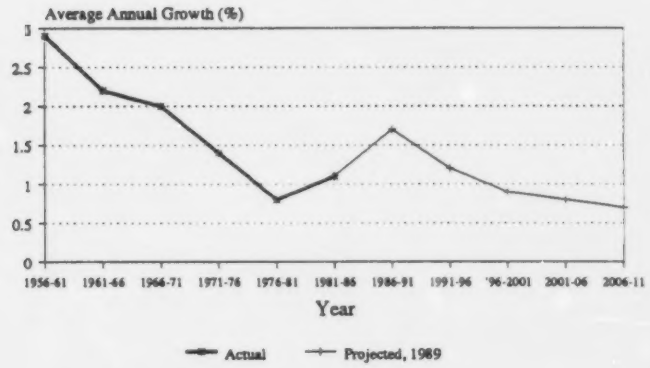
Similarly, in Ontario, the rate of population growth has slowed. Growth is expected to continue to decline, due to an increasing proportion of elderly in the population and the likelihood that current low fertility rates will continue (Ministry of Treasury and Economics: MTE, 1987).

In 1986, the population of Ontario was 9,101,694, 5.5 percent higher than in 1981. The rate of population growth was higher than the rate recorded in the 1976-81 period when western provinces were the destination of many interprovincial migrants, but lower than growth in any period between 1956 and 1976. Sixty-nine percent of Ontario's growth between 1981 and 1986 was concentrated in the six central regions of Metro Toronto, York, Durham, Peel, Halton and Hamilton-Wentworth.

The average annual rate of growth in Ontario increased to 1.7 percent between 1986 and 1988, up from 1.1 percent between 1981 and 1986. Faster growth was the result of large migration flows to the Province. Population projections, released by the Ontario Ministry of Treasury and Economics in 1989, project an average annual rate of population growth of 1.7 percent between 1986 and 1991, declining to 0.7 percent by 2011. The Province of Ontario is projected to have population growth rates above the national average, based on the expectation that Ontario will continue to attract a large proportion of Canadian immigrants relative to the existing population, and will sustain a positive level of net interprovincial migration fairly similar to the historic average.

Graph 1.b

Population Growth Rate
Ontario, 1956-2011



Source: Ontario Ministry of Treasury and Economics, 1989

Regional Municipality of Hamilton-Wentworth

Population growth in Hamilton-Wentworth is also in a transition toward slower growth. In 1986, the population of Hamilton-Wentworth was 423,398[(1)], 2.9 percent higher than in 1981. Although considerably more rapid than growth during the 1970's, Hamilton-Wentworth's average annual growth rate of 0.6 percent between 1981 and 1986 did not keep pace with growth at the provincial and national levels. Since 1961, Hamilton-Wentworth has experienced slower growth than the province as a whole as the population has decentralized from traditional employment centres such as Hamilton-Wentworth and Metropolitan Toronto to Regions such as York and Peel (see table 1.i).

(1)The Census was conducted in June of 1986. Therefore, many McMaster students were not included. During the academic year, approximately 4,600 students came from outside of the Region to reside in Hamilton-Wentworth. (Estimate obtained from McMaster University, Registrar's Office, based on 1987-1988 registration data.)

Table 1.i

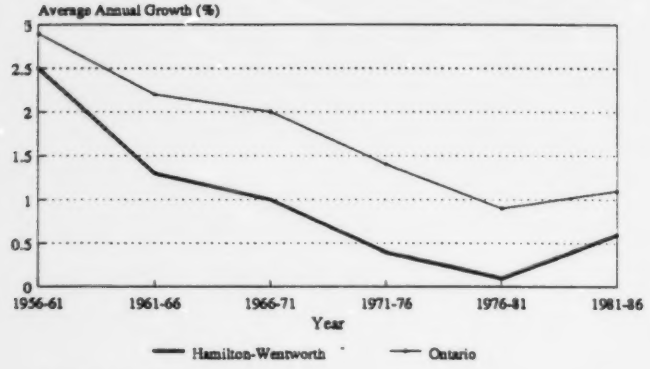
Census Population For Hamilton-Wentworth, The Six Central Regions, And Ontario, 1956-1986

		Population	Ave. Annual Growth	Share of Province (%)
1951	Hamilton-Wentworth	266,083		5.8
	Six Central Regions	1,659,712		36.1
	Ontario	4,597,542		
1956	Hamilton-Wentworth	316,238	3.4	5.9
	Six Central Regions	2,052,511	4.2	38.0
	Ontario	5,404,933	3.2	
1961	Hamilton-Wentworth	358,837	2.5	5.8
	Six Central Regions	2,486,298	3.8	39.9
	Ontario	6,236,092	2.9	
1966	Hamilton-Wentworth	383,175	1.3	5.5
	Six Central Regions	2,940,806	3.3	42.2
	Ontario	6,960,870	2.2	
1971	Hamilton-Wentworth	401,883	1.0	5.2
	Six Central Regions	3,347,582	2.6	43.5
	Ontario	7,703,106	2.0	
1976	Hamilton-Wentworth	409,490	0.4	5.0
	Six Central Regions	3,589,576	1.4	43.4
	Ontario	8,264,465	1.4	
1981	Hamilton-Wentworth	411,445	0.1	4.8
	Six Central Regions	3,829,156	1.3	44.4
	Ontario	8,625,107	0.9	
1986	Hamilton-Wentworth	423,398	0.6	4.7
	Six Central Regions	4,156,458	1.6	45.7
	Ontario	9,101,694	1.1	

The six central regions are: Hamilton-Wentworth, Metro Toronto, York, Durham, Peel, and Halton.
Population figures are based on current boundaries.
Sources: Statistics Canada, Census of Canada.

Graph 1.c

Population Growth Rates
Hamilton-Wentworth and Ontario, 1956-86



Source: Statistics Canada, Census

The 1981 Population Projections prepared by the Planning Department forecast that Hamilton-Wentworth's population in 1986 would be between 422,000 and 436,500, with 428,500 the "most likely" population. The Census population in 1986 was 423,400. The projected growth of 0.7 percent annually in the 1980 to 1986 period compares to the 0.6 percent average annual growth in the Census population between 1981 and 1986.

The Provincial Assessment, conducted by the Ontario Ministry of Revenue, provides evidence that the rate of population growth experienced in Hamilton-Wentworth between 1985 and 1988 was higher than growth rates experienced during any period between 1971 and 1986. The assessed population of Hamilton-Wentworth in 1988 was 429,466[(1)], up from 419,200[(1)] in 1985. This represents an average annual growth rate of 0.8 percent between 1985 and 1988 (see table 1.ii).

(1) Excluding population residing on campus at McMaster University

Area Municipalities in Hamilton-Wentworth

Growth patterns have varied between Area Municipalities in the Region. Between 1981 and 1986, Ancaster, Stoney Creek, and Flamborough grew most rapidly, with average annual growth rates of 3.6 percent, 3.4 percent, and 1.3 percent, respectively. Most municipalities experienced faster growth between 1981 and 1986 than between 1976 and 1981.

The distribution of Regional population growth by Area Municipality in 1986 was somewhat different from the distribution projected in 1981. For example, Stoney Creek grew faster than projected as a result of continued rapid development eastward below the mountain. In contrast, Ancaster's growth was somewhat slower than projected because a major residential development near Highway 403 was delayed as ownership of the property changed.

The 1988 Provincial Assessment provides the most current data on the population of area municipalities. Population growth rates between 1985 and 1988 were: 5.9 percent in Ancaster; 0.9 percent in Dundas; 2.0 percent in Flamborough; 0.2 percent in Glanbrook; 0.2 percent in Hamilton: and, 2.7 percent in Stoney Creek.

Table 1.ii

Average Annual Growth Rates
Hamilton-Wentworth and Area Municipalities, 1971-88

	1971-76	1976-81	1981-86	1985-88
Ancaster	-1.13%	0.24%	3.58%	5.86%
Dundas	0.46%	0.42%	0.54%	0.92%
Flamborough	2.38%	0.74%	1.32%	2.00%
Glanbrook	0.48%	-0.83%	-0.36%	0.17%
Hamilton	0.18%	-0.36%	0.02%	0.16%
Stoney Creek	2.03%	3.86%	3.38%	2.67%
Region	0.41%	0.10%	0.57%	0.80%

Note: Growth rates are based on current boundaries

Source: Statistics Canada, Census and Ontario Ministry of Revenue

Table 1.iii

Population and Population Shares
Hamilton-Wentworth and Area Municipalities, 1971-88

	Hamilton	Ancaster	Flamborough	Dundas	Stoney Creek	Glanbrook	Hamilton-Wentworth
1971 Population	309,173	15,087	20,930	18,740	27,373	9,936	401,239
Pop. Share (%)	77.1	3.8	5.2	4.7	6.8	2.5	100
1976 Population	312,003	14,255	23,580	19,179	30,294	10,179	409,490
Pop. Share (%)	76.2	3.5	5.8	4.7	7.4	2.5	100
1981 Population	306,434	14,428	24,470	19,586	36,762	9,765	411,445
Pop. Share (%)	74.5	3.5	5.9	4.8	8.9	2.4	100
1986 Population	306,728	17,264	26,142	20,118	43,554	9,592	423,398
Pop. Share (%)	72.4	4.1	5.9	4.8	10.3	2.3	100
1988 Population	307,160	19,728	27,116	20,640	45,329	9,493	429,466
Pop. Share (%)	71.5	4.6	6.3	4.8	10.6	2.2	100

Notes: Counts were conducted during summer months and thus do not include much of the population of McMaster University

Municipal shares may not add to 100 due to rounding

Source: Statistics Canada, Census of Canada and Ontario Ministry of Revenue, 1988

1.2 Natural Increase

Natural population increase equals the difference between the number of births and the number of deaths which occur annually. The age structure of a population has an important bearing on natural increase because the size of the elderly cohort influences the number of deaths, and the size of the cohort of women in the childbearing years influences the number of births. At the same time fertility and mortality rates also exert powerful influences on the rate of natural increase in a population. The higher the fertility rate, the more children; the lower the mortality rate, the fewer deaths.

Age Structure

The present age structure of the population is conducive to producing more births and fewer deaths, and consequently a faster rate of natural increase, than the age structure likely to exist in the future. In 1986, the number of women in their prime childbearing years (20-34) in Ontario was 1,210,210, or 13 percent of the total population. As a result of the aging of the baby boom, the number of women in their prime childbearing years is projected to decrease to 1,092,400, or 10 percent of the Ontario population, by the year 2006 (MTE: 1989).

At the same time, as the percentage of the population in the elderly cohorts increases, the number of deaths will increase due to the higher mortality rates experienced by the older population. In 1986, in Ontario, 11 percent of the total population, or 992,700 people, were aged 65 and over. By 2006, the number of individuals 65 and over is projected to increase to 1,530,200, or 16 percent of the total population (MTE: 1989).

Mortality

Life expectancy is an important component of population growth as it influences both the age structure of a population and the number of deaths likely to occur. Increases in life expectancy over time result as the risk of an individual of a particular age dying within the year decreases. This risk is measured using age specific mortality rates - a measure of the number of deaths per year per thousand people in a particular age group.

Mortality rates have dropped dramatically this century and the overall death rate is presently quite low (approximately 7.2 deaths per 1,000 population per year). Age and sex specific mortality rates for both sexes and for all ages below 50 (except infants) are below five deaths per thousand. Any further significant decreases which may result from improved lifestyles, treatment of certain types of cancer, etc. will have the greatest impact upon the mortality rates for those over 50.

The trend towards lower mortality rates since the 1950s for those over 50 has been significant, and has been felt disproportionately by women. However, recent data suggests that the gap between male and female longevity may have stabilized. Improvements in life expectancies for those over 50 of both sexes are likely to occur. (Stone: 1986)

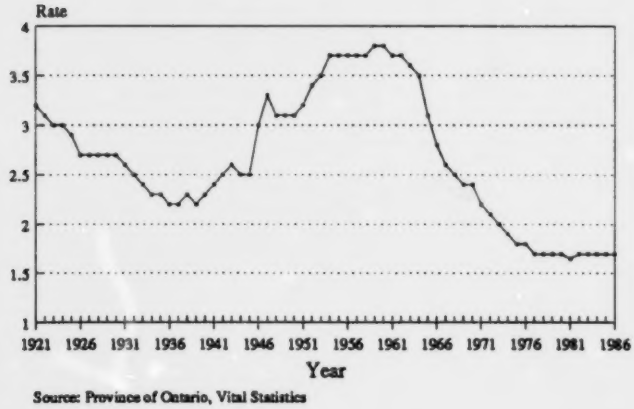
The 1981 Review projected that age specific mortality rates would remain close to the provincial average for the last seven years, with the exception of those one year of age and under and over 65 years. This scenario underestimated the improvements in life expectancies which have occurred since 1981. In order to incorporate recent improvements in life expectancy, and to anticipate further improvements in the treatment of disease and maintenance of healthier lifestyles, current projections reflect declining mortality for most age groups. The age groups projected to experience the greatest declines are those over 50 and one year of age and under.

Fertility

The total fertility rate [1] for the Province of Ontario has remained stable within the range of 1.63 and 1.69 since 1977. This marks the levelling off of a long decline from the peak of the baby boom in 1959, when the total fertility rate reached 3.8. The forces contributing to this decline include the increased availability of safe and effective contraception, the increasing labour market participation of women, preferences for later ages of childbearing and smaller families, decreasing marriage rates and increasing divorce rates, and the numerous economic considerations related to raising children. (Statistics Canada: 1984, p 84)

Graph 1.d

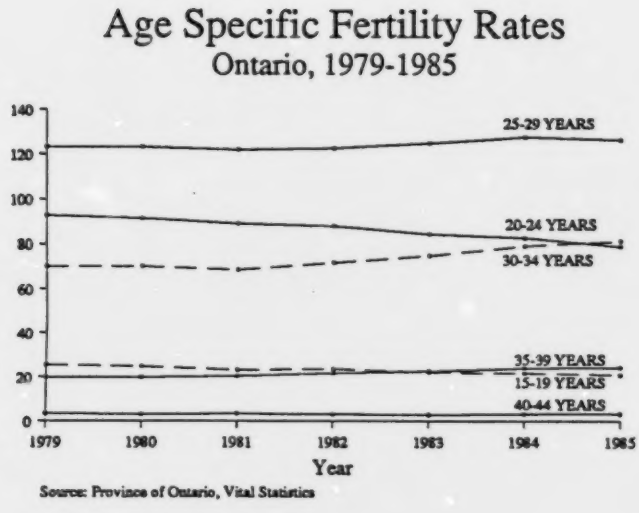
Total Fertility Rate
Ontario 1921-1986



Source: Province of Ontario, Vital Statistics

(1) The total fertility rate is calculated based on the number of children a woman would bear over her reproductive cycle given the age specific fertility rates of a given year.

Graph 1.e



Although the total fertility rate in Ontario has remained fairly stable in the 1978 to 1988 period, there have been some changes in age-specific fertility. For example, there has been an upturn in the fertility rate for women aged 30 - 34 years of age, from 68.6 births per 1,000 women in 1981 to 82.6 births per 1,000 women in 1985. At the same time, the youngest groups (15-19 and 20-24) have experienced fertility decreases.

The increase in fertility rates in the 30-34 year age group suggests Canadian women are exercising more control over the age of childbearing. They are more likely to choose this stage of their lifecycle to have their first or second child. This age-specific increase in fertility does not mean the total fertility rate is increasing. As Grindstaff points out, "these women are 'catching up' in a particular sense, that of having a child, but not in terms of numbers of children." (Statistics Canada, 1984).

Future Fertility Possibilities

Population growth is extremely sensitive to changes in fertility. For example, in 1984 Statistics Canada estimated that if the total fertility rate were to decline from its present level of 1.7 to 1.5 by 1991, and then to remain constant to the end of the century, the total Canadian population would be 26 million by the year 2001. In contrast, if total fertility were to increase to 2.5 (well below levels reached during the baby boom), then the Canadian population would number 29 million by 2001 (Statistics Canada, 1984).

The 1981 Population Review projected that total fertility would decrease from 1.7 in 1978 to approximately 1.62 in 1986 and 1.57 in 1991, and to remain at 1.57 for the balance of the projection period, under the "low" and "most likely" scenarios. These assumptions were reasonably accurate for the 1980 to 1986 period. Under the "high" growth scenario, the fertility rate was projected to increase gradually to 1.9 by 2001.

In this Report, population growth in Hamilton-Wentworth is considered under a range of fertility scenarios (see table 1.iv). This recognizes the sensitivity of population growth to fertility rates, and the possibility that fertility rates may follow any one of several trends in the future.

The **low fertility scenario** is premised on the theory that a long term decline in fertility rates is inevitably tied to modernization, and that societal forces are likely to operate in a manner that will contribute to yet further declines. According to this theory, the baby boom was a historical anomaly, and the baby bust is a continuation of a long term trend.

One of the leading proponents of this theory, C. Westoff, explains how declining fertility is related to the forces of modern society:

> Frequently (and inadequately) summarized by the term "modernization", these include the erosion of traditional and religious authority, which promoted self-determination and relaxed sexual inhibitions, the growth of individualism, urbanization, the rise of mass education, the increasing equality and independence of women, and (as Degler, 1980, argues) 'women's growing awareness of their self interest', and the ideology of consumerism. Such social changes, when combined with modern contraceptive technology, in some instances with delayed marriage, and, more recently, with legalized abortion, make very low fertility quite comprehensible. The important consideration for the prediction that fertility will remain low is that none of these changes, with the possible exception of legal abortion, seems likely to be reversed, and at least one radical change - the growing independence of women - has not yet run its full course. (Westoff, 1983, p. 101)

Further reductions in the fertility rate could occur. At the international level, Denmark and the Federal Republic of Germany have registered total fertility rates lower than Canada (1.4), and these countries are followed closely by other European and Scandinavian countries (Employment and Immigration Commission, 1987, p7). Moreover, within Canada, the current fertility rate in the Province of Quebec is 1.4.

The theory behind a continuing decrease in the total fertility rate, while supported by precedents both within Canada and at an international level, does not accommodate the possibility that institutional solutions to the conflicts of female labour force participation and childbearing (such as more flexible childcare facilities) may influence future fertility rates. It also does not recognize that a higher immigrant population in the future may exert upward pressure on fertility. The level currently experienced in Quebec and in countries such as Denmark is therefore being considered as a low scenario.

The **constant fertility scenario** assumes that the long term decline in fertility rates has now bottomed out and that total fertility rates will continue to fluctuate within the narrow range registered in the past eight years. Presumably, further social changes that may occur, such as continued reductions in the preponderance of the traditional family unit, will not result in further decreases in the fertility rate. The constant fertility scenario is used in the "most likely" projections.

The **high fertility scenario** envisions swings in the total fertility rate induced primarily by economic considerations. As the economy improves, economic uncertainties which may have inhibited marriage and childbirth are removed. It follows that, as the smaller size of the baby bust generation is assumed to produce a less competitive environment for its members, this generation may be more secure economically, and therefore more inclined to form families. The Easterlin approach to explaining fertility predicts that fertility rates will rebound in developed countries in response to conditions such as these (Canada Employment and Immigration Commission, 1987).

The theory of swings in fertility induced primarily by economic factors imparts less importance to the idea of a long term decline in fertility related to the forces of modern society than do scenarios of low or constant fertility. In so far as the persistence of low fertility rates in Canada and abroad lends credence to the lower fertility scenarios, the possibility of a rebound in fertility rates in response to economic prosperity and the aging of the baby boom is considered only as a high scenario.

Table 1.iv

A Range of Fertility Scenarios

	1988	1991	1996	2001	2006
Low Fertility Scenario	1.7	1.6	1.5	1.5	1.4
Constant Fertility Sceanrio	1.7	1.7	1.7	1.7	1.7
High Fertility Scenario	1.7	1.8	1.9	1.9	2.0

1.3 Migration

Migration is the most volatile and hence unpredictable component of population growth. Migration is also the component of population growth which can be most significantly influenced by Regional policies. Net migration is the difference between the movers into an area and the movers out of an area. Net migration to a Regional Municipality has three components - net international migration, net interprovincial migration, and net intraprovincial migration.

International Migration

Levels of international migration are very dependent upon federal immigration policy. In 1984, 1985 and 1986, the level of immigration to Canada was low relative to the levels recorded during the previous two decades (see graph 1.f). Between 1984 and 1986, net immigration averaged 39,000, compared to annual average net immigration of 77,000 between 1967 and 1986.

In 1987, the number of immigrants to Canada increased 45 percent from 1986 levels, to 128,100 (Statistics Canada, Catalogue 91-002). Preliminary data indicates that in 1988 150,775 immigrants entered Canada.

Table 1.v **International Flow of Migrants Canada, 1982-88**

	Immigration	Emigration	Net Migration
1982	134,920	44,823	90,097
1983	105,286	49,869	55,417
1984	86,389	47,967	38,422
1985	81,868	47,967	33,901
1986	88,639	43,594	45,045
1987	128,089	41,134	86,955
1988 (p)	150,775	41,738	109,037

Source: Statistics Canada, Catalogue 91-210, 91-002

(p) = Preliminary Data

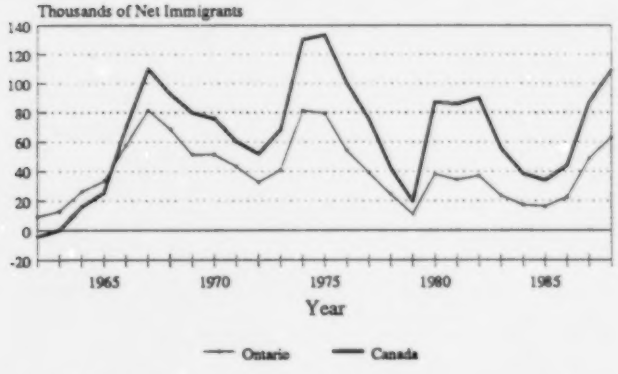
Recent increases in immigration are consistent with current federal policy supportive of the maintenance of relatively high immigration levels. This policy is a response to the demographic situation in Canada as it will "help forestall a projected decrease in the Canadian population which could begin at, or shortly after, the turn of the century if fertility remains at current below replacement levels, and if net immigration is not moved upward" (Employment and Immigration Canada, 1987). The policy is also a recognition of the broad economic and social benefits associated with a less restrictive immigration policy.

Historically, Ontario has experienced more rapid growth than Canada, partly because the share of immigrants settling in the Province has been large relative to the existing distribution of population. During the first half of the 1980s, however, Ontario experienced relatively low levels of immigration. In the early 1980s, this was caused by the large number of immigrants destined for other Provinces. More recently, low levels of Canadian immigration contributed to low levels of immigration to Ontario.

The level of international migration to Canada and Ontario changed dramatically in 1987, when net immigration to Canada reached 87,000 and net immigration to Ontario reached 48,600. Levels of net international migration to Canada and Ontario increased again in 1988, to 109,100 and 63,100, respectively. A federal policy supportive of continuing high immigration levels would result in continuing high levels of immigration to the Province of Ontario.

Graph 1.f

Net International Migration
Canada and Ontario, 1962-1988

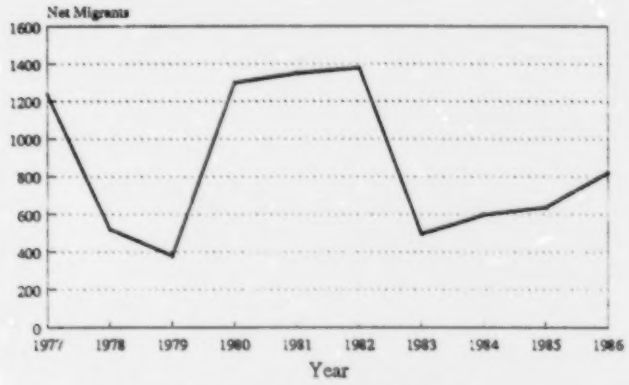


Source: Statistics Canada, Catalogues 91-210, 91-002

International migration is an important source of net migrants to the Hamilton-Wentworth Region. The 1981 Review projected international migration to Hamilton-Wentworth to average 1,225 net migrants annually. This is higher than the 800 average annual net international migrants to Hamilton-Wentworth between 1981 and 1986. However, if Canadian immigration levels remain high in accordance with current federal policy, then net international migration to Hamilton-Wentworth could reach or exceed this level.

Graph 1.g

Net International Migration
Hamilton-Wentworth, 1977-1986



Source: Statistics Canada, Small Area and Admin. Data

In recognition of the volatile nature of immigration, the Regional projections use the long term (1967-1987) average annual net immigration to Ontario (38,000) to project "most likely" net immigration in the long term. In the short term, the annual level of international migration to Ontario is expected to remain above the long term average (MTE, 1989). Accordingly, annual net immigration to Ontario is projected to average 48,000 in the short term.

Hamilton-Wentworth is projected to receive a share of net international migration to Ontario of 4.0 percent between 1989 and 1996, increasing to 4.2 percent between 1997 and 2006. This is higher than the average share received between 1977 and 1986 and reflects the assumption that Hamilton-Wentworth will be increasingly attractive to immigrant populations as a result of high land and housing costs in the greater Toronto area. Thus, projected annual net international migration to Hamilton-Wentworth under the "most likely" scenario is 48,000 x 4.0%, or 1,920, from 1989 to 1996, declining to 38,000 x 4.2%, or 1,600, between 1997 and 2006.

Under the "high migration" scenario, Hamilton-Wentworth is projected to increase its share of net international migration to Ontario to 4.7 percent. An increased share of international migration would necessarily coincide with enhanced services supportive of major immigrant groups. This share of net Ontario immigration, combined with immigration levels somewhat above the long term average, would result in average annual net international migration of 1,975 to Hamilton-Wentworth.

The "low" international migration scenario projects fewer net immigrants to Canada, similar to the average annual net international migration between 1977 and 1986, combined with a projected 3.0 percent share of net Ontario immigration to Hamilton-Wentworth. This would result in average annual net international migration of 990 to Hamilton-Wentworth.

Interprovincial Migration

Interprovincial migration is subject to wide swings in magnitude and direction. Economic and political determinants figure prominently in interprovincial migration. Between 1976 and 1981, Ontario experienced a net loss of migrants to other Provinces as a result of the economic boom in the West. By 1983, westward migration had subsided and Ontario was experiencing an influx of migrants as a result of political uncertainties in Quebec. In 1984, 1985, 1986 and 1987, an expanding Ontario economy attracted net migrants from all provinces, except Prince Edward Island. In 1988, net migration from other provinces to Ontario began to moderate.

Table 1.vi

Net Interprovincial Migration to Ontario, 1976-1986

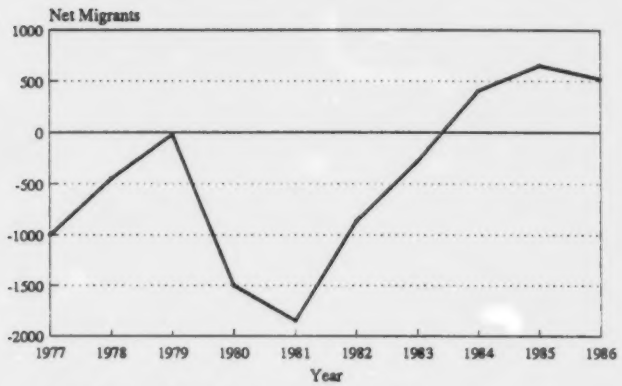
FROM:	Annual Ave. 1976-1981	1982	1983	1984	1985	1986
Quebec	20,300	15,550	15,420	19,750	11,645	6,517
Newfoundland	710	1,310	-650	1,240	1,446	2,695
P.E.I.	-250	-10	-20	-150	-242	71
Nova Scotia	-240	260	320	760	738	2,275
New Brunswick	40	810	-100	240	771	2,310
Manitoba	-670	-730	-480	810	510	1,723
Saskatchewan	-1,300	-770	-300	240	674	1,830
Alberta	-19,920	-17,540	1,310	17,700	16,886	10,893
British Columbia	-9,900	-3,970	-410	1,060	5,368	5,385
Yukon & N.W.T.	-340	-580	20	420	85	160
Total	-11,570	-5,670	15,110	42,070	37,881	33,859

Source: Statistics Canada, Catalogue 92-210 and Ontario Ministry of Treasury and Economics.

Hamilton-Wentworth has benefitted from an expanding Ontario economy and from recent high levels of interprovincial migration to Ontario. Many interprovincial migrants to Hamilton-Wentworth between 1984 and 1986 were returning from Alberta due to the collapse of the economic boom in the West (Small Area Administrative Data, 1987).

Graph 1.h

Net Interprovincial Migration
Hamilton-Wentworth 1977-1986



Source: Statistics Canada, Small Area and Admin. Data

The number of interprovincial migrants to Ontario is expected to decline from the high levels of recent years (MTE, 1989 and Statistics Canada, 1984). If this occurs, the level of interprovincial migration to Hamilton-Wentworth experienced in 1984, 1985 and 1986 cannot be sustained. The 1981 Review assumed that interprovincial migration at both the Regional and Provincial level would be relatively balanced over the period of the projections. The Ontario Demographic Bulletin published in 1989 projects that Ontario will experience annual net gains from interprovincial migration of approximately 10,000, although interprovincial migration during the early part of the projection period is expected to remain above this level as a result of the healthy Ontario economy.

Hamilton-Wentworth is projected to receive a relatively modest share of interprovincial migration (1.0 percent), consistent with historical experience. Thus, projected net interprovincial migration to Hamilton-Wentworth under the "most likely" scenario is 10,000 x 1.0%, or 100 migrants per year. This represents net interprovincial migration to Hamilton-Wentworth of almost 2,000 persons over the 18-year projection period.

Under the high migration scenario, Hamilton-Wentworth's share of net interprovincial migrants is projected to increase to 2.0 percent in response to momentum generated by quality of life improvements. This would result in annual net interprovincial migration to Hamilton-Wentworth of 200, assuming the long term net interprovincial migration to Ontario averaged 10,000. The low migration scenario assumes 50 net interprovincial migrants per year as a result of a lower share of interprovincial migrants destined for Hamilton-Wentworth.

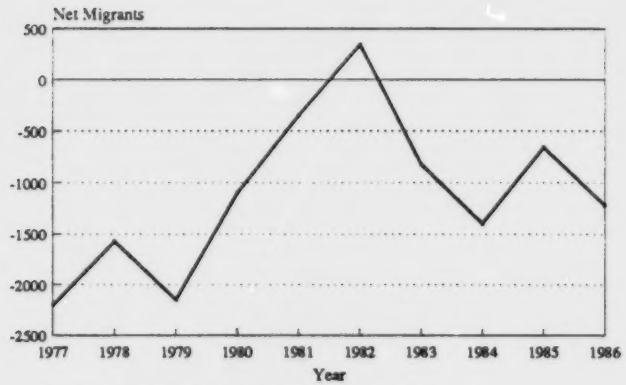
Intraprovincial Migration

Intraprovincial migration, or migration from Region to Region within Ontario, constitutes the most important component of migration in terms of the magnitude of flows, accounting for 80 percent of migration to and from Hamilton-Wentworth between 1981 and 1986. Intraprovincial migration is also the component of migration which has consistently produced large negative net flows of population from the Region.

Negative net intraprovincial flows totalling 7,500 between 1976 and 1981 were largely responsible for slow population growth in Hamilton-Wentworth during this period. Between 1981 and 1986, the number of negative net intraprovincial migrants was 3,800. The 1981 Review accurately projected the migration losses which characterized the intraprovincial movement of people to and from Hamilton-Wentworth during the early 1980s. Between 1986 and 1988, a moderation in intraregional migration losses contributed to the increased growth experienced.

Graph 1.i

Net Intraprovincial Migration
Hamilton-Wentworth 1977-1986



Source: Statistics Canada, Small Area and Admin. Data

Hamilton-Wentworth's success in attracting intraprovincial migrants will hinge upon the competitive advantages of locating in Hamilton-Wentworth as opposed to other regions in Southern Ontario. Some of the considerations likely to influence Hamilton-Wentworth's competitive position include the availability of housing; the number and diversity of jobs generated in employment centres in the Region; the effectiveness of marketing Hamilton-Wentworth as a place to live; the quality of life amenities available (such as the services offered in the Regional Centre); and, the nature and extent of improvements to transportation infrastructure (such as the GO Train expansion).

The competitive position of Hamilton-Wentworth has improved due to quality of life and infrastructure improvements and due to pressures created by land and housing cost increases in the greater Toronto area. As a result, the average annual net loss of migrants has moderated from the losses experienced between 1971 and 1986. Average annual intraprovincial migration is projected to be approximately -630 between 1988 and 1996, improving to -150 between 1997 and 2006 as a result of planned transportation and quality of life improvements. This compares to annual net intraprovincial migration of -1,130 between 1976 and 1986.

Under the high migration scenario, average annual net intraprovincial migration is projected to improve to 250. This would accompany a marked improvement in Hamilton-Wentworth's competitive position relative to other Regions in Ontario.

Under the low migration scenario, Hamilton-Wentworth continues to experience relatively large migration losses to other municipalities as a result of delays in major transportation projects and of a failure to implement quality of life improvements. Average annual net intraprovincial migration under the low scenario is projected to be -850.

Future Migration Possibilities

Future levels of migration to Hamilton-Wentworth will be a product of net international migration, net interprovincial migration, and net intraprovincial migration. Average annual net migration to Hamilton-Wentworth has improved from -1,870 between 1976 and 1981 to approximately 900 between 1985 and 1988 (see table A.2). It is likely that future annual migration will be somewhat higher than that experienced between 1985 and 1988 given the scenario of high levels of international migration, improved levels of intraprovincial migration, and net interprovincial migration lower than its recent high. Average annual net migration is projected to be 1,390 between 1989 and 1996. Net migration is projected to improve to 1,550 between 1997 and 2006 as Hamilton-Wentworth's competitive position continues to improve and as losses due to intraprovincial migration decrease.

The assumptions underlying the "most likely" migration scenario are outlined below. Also, given the uncertainties associated with the projection of migration, high and low scenarios are detailed. The high migration scenario projects annual net migration to average 2,425 between 1988 and 2006. The low migration scenario projects annual net migration to average 190 between 1988 and 2006.

Most Likely Scenario

This scenario assumes:

- a federal policy supportive of the maintenance of current high immigration levels
- a share of international migration destined for Hamilton-Wentworth higher than that experienced between 1977 and 1986

- a decline from recent high levels of net interprovincial migration as out-migration from the West declines
- a decline in the level of net migration from Hamilton-Wentworth to other regions in the province, encouraged by Regional and Municipal policies designed to ensure:
  - the existence of a good housing stock
  - a cost of living advantage
  - ample land for residential development
  - the benefits of transportation improvements such as the construction of the NS-EW Freeway and the GO Train extension
  - employment opportunities generated through growth in Regional Industrial-Business Parks and Regional and Municipal Centres
  - the existence of a range of social and cultural services and recreational opportunities in the Region
  - residential development appealing to commuters from employment centres in Hamilton-Wentworth, Peel, Toronto and Halton
  - continued public and private investment in quality of life amenities such as parklands, neighbourhood upkeep, road quality, and pollution abatement technology
  - improvements in Hamilton-Wentworth's image as a result of marketing Hamilton-Wentworth's quality of life advantages and of marketing recent and planned improvements in the environment of the Region.

High Migration Scenario

This scenario is premised upon:

- a federal policy supportive of the maintenance of current high immigration levels
- a significant improvement in the share of international migration destined for Hamilton-Wentworth
- a continuation of positive levels of interprovincial migration to Ontario
- an increase in the share of interprovincial migration destined for Hamilton-Wentworth
- Positive net migration to Hamilton-Wentworth from other parts of Ontario encouraged by aggressive Regional and Municipal policies designed to ensure:
  - extension of full GO Train service to the Region
  - progress on plans for a Perimeter Road, a 403 link to Brantford, and Highway 6 North and South improvements

- expansion of appropriate services at the Hamilton Airport
- the successful attraction of migrants in their household formation stage to Hamilton-Wentworth
- continuing residential development appealing to commuters from employment centres in Hamilton-Wentworth as well as Toronto, Peel, and Halton
- rapid growth in a number of the Region's Industrial-Business Parks
- high levels of employment growth in the Regional Centre
- a continuation of current cost of living advantages
- an increase in public and private investment in neighbourhood upkeep, road quality and pollution abatement technology
- an expansion of recreational opportunities and social and cultural services in Hamilton-Wentworth
- significant improvements in Hamilton-Wentworth's image as a result of successfully marketing Hamilton-Wentworth's quality of life advantages and of successfully marketing recent and planned improvements in the environment of the Region.

Low Growth Scenario

This scenario is based upon:

- low levels of net international migration to Canada and a slight decline in the share of immigrants attracted to the Region
- moderate levels of interprovincial migration to Ontario and no improvement in the share of interprovincial migrants attracted to the Region
- high levels of net migration from Hamilton-Wentworth to other parts of Ontario reflecting:
  - the success of other Regions in Ontario in attracting migrants
  - moderate levels of employment growth in the Region's Industrial-Business Parks
  - delays in the completion of major transportation projects
  - no improvements in the quality of life in the Region
  - no improvements in the Region's image.

Table 1.vii

REGIONAL MIGRATION ASSUMPTIONS

		Average Annual Migration	
MOST LIKELY	**International**	48,000 x (4.0%)	1,920
1989-1996	**Interprovincial**	10,000 x (1.0%)	100
	Intraprovincial	-630	-630
	TOTAL		1,390

		Average Annual Migration	
MOST LIKELY	**International**	38,000 x (4.2%)	1,600
1997-2006	**Interprovincial**	10,000 x (1.0%)	100
	Intraprovincial	-150	-150
	TOTAL		1,550

		Average Annual Migration	
LOW	**International**	33,000 x (3.0%)	990
1989-2006	**Interprovincial**	10,000 x (0.5%)	50
	Intraprovincial	-850	-850
	TOTAL		190

		Average Annual Migration	
HIGH	**International**	42,000 x (4.7%)	1,975
1989-2006	**Interprovincial**	10,000 x (2.0%)	200
	Intraprovincial	250	250
	TOTAL		2,425

Section Two: Growth Projections

2.1 Population Growth Scenarios

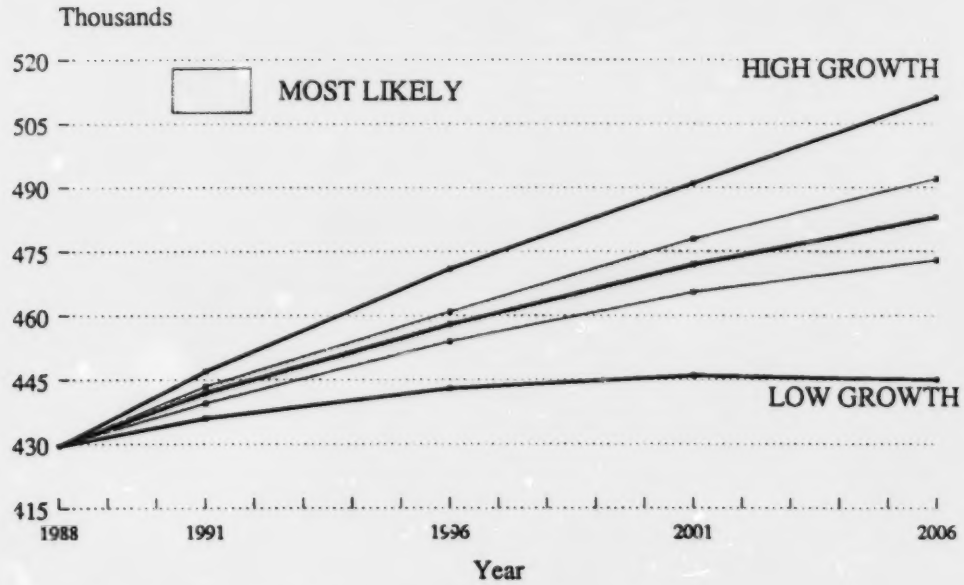
The population of Hamilton-Wentworth is projected to increase from 429,000 in 1988 to 483,000 in 2006 under the "most likely" scenario. This scenario is within a range[1] (473,000-492,000) of Regional growth most likely to occur. The projected average annual rate of growth declines from 1.0 percent between 1988 and 1991 to 0.5 percent between 2001 and 2006.

The trend towards declining rates of growth over the 1988 to 2006 period is also evident in the projections made by the Ministry of Treasury and Economics for the Province of Ontario. Ontario's average annual rate of population growth is projected to decrease from 1.7 percent in the 1986-91 period to 0.7 percent in the 2001-2006 period (MTE, 1989).

The rate of growth in Hamilton-Wentworth is projected to remain below the rate of growth in the Province throughout the projection period. This is consistent with growth patterns between 1956 and 1988, and reflects the unique age structure and migration patterns characterizing the Region. However, Hamilton-Wentworth's rate of growth relative to Ontario's increases in the latter part of the projection period as the result of an improved competitive position vis-a-vis other Regions.

Graph 2.a

Population Growth Scenarios
Hamilton-Wentworth, 1988-2006



Source: Hamilton-Wentworth Planning and Development Dept.

(1) The "most likely" range recognizes that the projections are most accurate during the early part of the projection period. There is greater uncertainty associated with the forecasts as the number of years from the base year (1988) increases.

Sensitivity of Projections

The population projections are sensitive to changes in fertility and migration. A number of alternative fertility and migration scenarios have been considered to reflect the uncertainties inherent in projecting future fertility and migration trends. The 2006 population in the high growth scenario (511,000) assumes that conditions of both high fertility and high migration are experienced; the 2006 population in the low growth scenario (445,000) assumes that conditions of low fertility and low migration are experienced. In addition, the projections were run using 1986 Census data and 1988 Assessment data to test the sensitivity of the projections to different base populations.

Migration Scenarios

The 'most likely' population projection assumes that migration will be 1,390 net in-migrants annually between 1989 and 1996, increasing to 1,550 in 1997. If, however, annual net migration is 190 throughout the projection period, as assumed in the low migration scenario, then the population of Hamilton-Wentworth in 2006 will be 452,000 (assuming fertility constant at 1.68). The 2006 population assuming low migration is 7 percent lower than the most likely scenario.

On the other hand, if annual net migration is 2,425 throughout the projection period, as assumed in the high migration scenario, then the population would increase to 503,000. The 2006 population in this scenario is 4 percent higher than the most likely scenario.

Table 2.i

SENSITIVITY ANALYSIS

Population scenario given low, medium and high migration.
(Fertility held constant at 1.68 births.)

	1988	1991	1996	2001	2006
Low Migration	429,500	437,000	445,000	450,000	452,000
Medium Migration	429,500	442,000	458,000	472,000	483,000
High Migration	429,500	446,000	468,000	486,000	503,000

Low: Migration projected at 190 annual net migrants per year.
Medium.: Migration projected at 1390 annual net migrants, 1989-96; increasing to 1550 1997-2006.
High: Migration projected at 2425 annual net migrants per year.

Fertility Scenerios

The 'most likely' population projection assumes that total fertility will stabilize at 1.68. However, should the fertility rate decline to 1.38, perhaps in response to the increased costs of childrearing and higher material expectations of parents, then the population of Hamilton-Wentworth in 2006, given medium migration assumptions, would be 476,000. The 2006 population in this scenario is 1.4 percent lower than the most likely scenario.

On the other hand, if the fertility rate were to increase to 2.02 by 2006, as assumed in the high fertility scenario, then the population of Hamilton-Wentworth would increase to 491,000 (given medium migration assumptions). The 2006 population in this scenario is 1.7 percent higher than the most likely scenario.

Table 2.ii

SENSITIVITY ANALYSIS

Population scenarios given low, medium and high fertility

(Migration: 1390 annual net migrants, 1989-96; and, 1550 annual net migrants, 1997 -2006)

	1988	1991	1996	2001	2006
Low Fertility	429,500	441,000	456,000	468,000	476,000
Medium Fertility	429,500	442,000	458,000	472,000	483,000
High Fertility	429,500	443,000	461,000	477,000	491,000

Low: Fertility projected to decline from 1.678 (1989-90) to 1.60 (1991-95) to 1.53 (1996-2000) to 1.45 (2001-2005) to 1.38 (2006).

Medium: Fertility projected to remain constant at 1.678 throughout projection period.

High: Fertility projected to increase from 1.678 (1989-1990); to 1.76(1991-1995); to 1.85 (1996-2000); to 1.93 (2001-2005); to 2.02 (2006).

High and Low Growth Scenarios

Migration and fertility rates may combine to achieve a 2006 population higher or lower than the migration and fertility scenarios described. A combination of high fertility and high migration would result in a 2006 population of 511,000. A combination of low fertility and low migration would result in a 2006 population of 445,000.

Sensitivity to Base Population

The 1988 Assessment and the 1986 Census provide alternative data sources for the base population. Projections based on 1986 data projected a Regional population of 428,920 in 1988. The 1988 assessment population was 429,466, 0.1 percent higher.

2.2 Age Cohort Analysis

The age composition of the population will change over the projection period. There will be an increase in the proportion of the population over 65 and a decrease in the proportion of children. Also, the age structure of the population 15 to 65 will shift. The median age of this population, generally considered to be the population from which the labour force is drawn, is projected to increase from 34 in 1988 to 41 in 2006.

Table 2.iii

Population Growth by Age Cohort
Hamilton-Wentworth, 1988-2006

	1988		1996		2006		% change
	#	%	#	%	#	%	1988-2006
0-14	82,910	19.3	87,900	19.2	83,000	17.2	0
15-24	64,391	15.0	57,700	12.6	61,900	12.8	-4
25-39	105,721	24.6	107,600	23.5	92,500	19.2	-13
40-64	119,175	27.7	136,200	29.7	171,700	35.5	44
65+	57,270	13.3	68,600	15.0	73,900	15.3	29
TOTAL	429,467	100.0	458,000	100.0	483,000	100.0	12

Source: Ministry of Revenue, Assessment Division & Hamilton-Wentworth Planning and Development Dept.

The population growth rates of different age cohorts will vary considerably. For example, the number of children (0-14) is projected to increase between 1988 and 1996, then to decline to approximately 1988 levels by 2006. By contrast, the population aged 65 and over will increase by 29 percent over the projection period. The age specific characteristics of population growth will impact upon the demand for services, upon the rate of growth and flexibility of the labour force, and upon expenditures and revenues of all levels of government. Moreover, age distribution and growth by age cohort vary by municipality, and such differences imply a need to plan for different hard and soft service requirements.

Children (0-14 years)

The number of children is projected to increase from 82,900 to 87,900, or 6 percent, between 1988 and 1996. This increase, which occurs because the bulk of the baby boom generation is in the reproductive years, is commonly referred to as the "baby boom echo." The baby boom echo is of a smaller magnitude than the baby boom, because of current low fertility rates.

The baby boom echo will be replaced by a much smaller cohort by the year 2006. This is because the baby boom generation will have completed their reproductive cycle, resulting in less women of childbearing age in the population. As a result, the number of children is projected to decrease from 87,900 to 83,000, or 6 percent, between 1996 and 2006. The most dramatic decline (13 percent) occurs in the youngest cohort (0-4 years of age).

The size of the 0-14 year cohort is sensitive to fertility changes. For example, if the fertility rate were to gradually increase to 2.02, the population of children would be 90,000 in the year 2006. On the other hand, the population of children would be 76,000 in 2006 if the fertility rate were to gradually decline to 1.38 (the present level in Quebec). In any case, however, there will be an increase in the population of children between 1988 and 1996, followed by a dramatic decline in the rate of growth of this population between 1996 and 2006.

The changes in the population of 0 to 14 year olds will require careful policy responses. The demand for youth services will increase to the year 1996 then fall significantly in some municipalities. Therefore, many of the structures and programs introduced to meet the demands of the baby boom echo should be designed with alternative uses in mind. For example, an alternative use for an educational facility may be a leisure centre to meet the needs of an older population once the demands of the baby boom echo subside. The choice of location and design of new buildings will influence their adaptability to alternative uses.

Youth (15-24)

The number of youth in Hamilton-Wentworth is projected to decrease from 64,400 to 61,900, or 4 percent, between 1988 and 2006. The decline is most precipitous for the 20-24 year age group, whose numbers drop 13 percent. This decline occurs as the youngest of the baby boom generation is replaced by a smaller cohort of individuals born during the 1970s, when fertility rates fell, and remained below, the replacement level of 2.1. This smaller cohort of individuals is commonly referred to as the baby bust generation.

The decline in the number of 15-24 year olds will have an important impact upon the growth of the labour force, because they are a prime source of new workers. The ratio of 15-24 year olds in the national labour force was 27 percent in 1976, as the baby boom reached labour force age. The large number of youth was reflected in 3.3 percent annual average growth in the Canadian labour force between 1971 and 1976. Annual average labour force growth is projected to decline to 0.4 percent between 1996 and 2006 (assuming moderate levels of foreign immigration and a continuation in participation rate trends), as the ratio of 15-24 year olds in the population of labour force age drops to 17 percent. (Denton and Spencer, 1987)

The slower rate of growth of the labour force will increase the demand for, relative to the supply of, labour. This rise in unmet demand for labour will result in demands for sustained high levels of foreign immigration. A policy of increased foreign immigration to meet labour market demands will in turn put pressure on social, educational and cultural services required to serve a larger immigrant population. The demand for "English as a second language" courses has already increased in some Regions in response to recent high levels of foreign immigration. The nature of services demanded will, to some extent, be dependent upon the ethnic composition of immigrants.

Higher participation rates amongst particular groups in the labour force may help to offset the projected decline. The rapid growth of participation rates amongst women since World War II contributed dramatically to the growth of the labour market during this period. The rate of labour force growth in the future may be conditioned by changing labour market activities of groups such as men and women over 65, individuals aged 55-64 (early retirement age), and women with children under 5. It may be necessary to introduce public policies to encourage or support the labour market activity of these groups. For example, day care is a service which supports and encourages working women with young children.

Adults (25-39)

The number of adults in this cohort will decrease from 105,720 in 1988 to 92,500 in 2006, or 13 percent. This decline occurs as the baby boom is replaced by the smaller cohort of individuals following them. The result will be fewer young families, fewer renters and first time home buyers, and fewer young, mobile adults in the labour market.

The decrease in the proportion of young adults will intensify competition to attract this mobile segment of the population. However, relatively fewer resources will be expended on services and facilities targeted to this group as demand declines and as the importance of issues affecting an older population are explored.

Adults (40-64)

The aging of the baby boom fuels the 44 percent growth of this cohort. The proportion of 40-64 year olds in the population increases from 28 percent in 1988 to 36 percent in 2006; the proportion of 40-64 year olds in the population of labour force age (15-64) increases from 41 percent to 53 percent.

As the baby boom ages, the increasing proportion of 40-64 year olds will impact upon service demands with the same force as the baby boom impacted upon the housing market in the 1980s. They will require leisure, health, education and social services particular to the needs of their cohort.

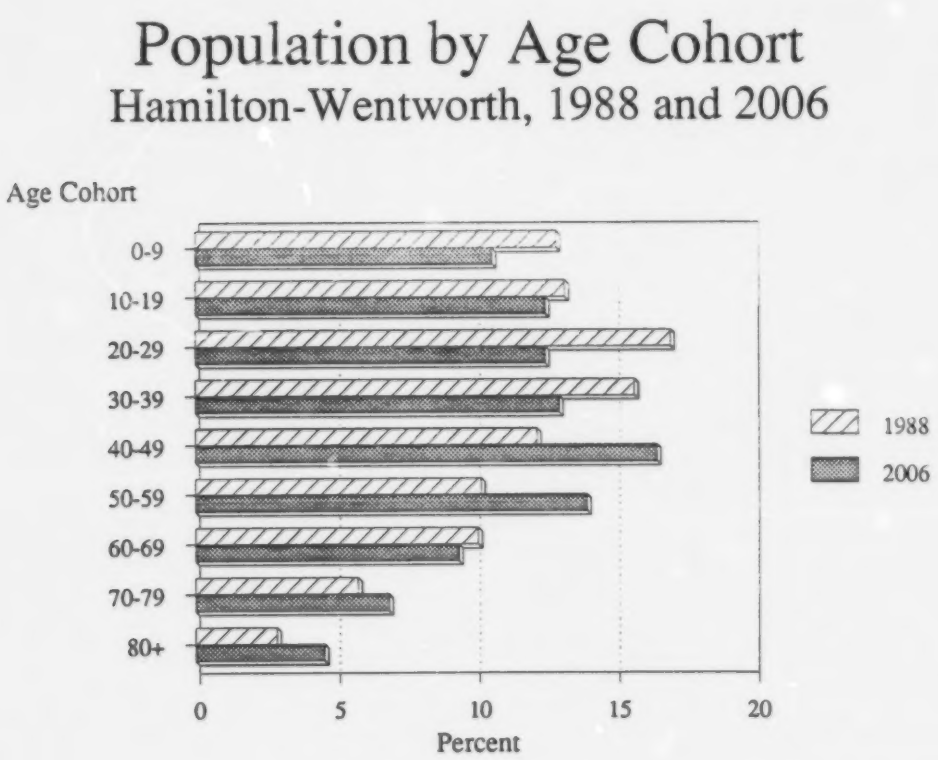
The concentration of individuals over 40 in the labour market will congest the corporate hierarchy as, with considerable work experience, these individuals seek management positions. The labour market will also become less flexible as older workers are less willing to move. Employers providing work that is challenging without being too physically demanding, perhaps able to offer incentives which go beyond the traditional promise of upward mobility, will be positioned to attract and retain labour from this rapidly growing segment of the market. Government programs assisting firms in accommodating a changing labour market will aid the transition. (Foot, 1987)

Seniors (65+)

The population over 64 years of age is projected to increase by 29 percent between 1988 and 2006. The size of this cohort relative to the total population will increase from 13 percent to 15 percent. The most elderly cohort (80+) will grow fastest, from 12,300 to 21,300, or 73 percent.

The growth in the size of the elderly cohort will increase the demand for hard and soft services directed at seniors. Such services include transit passes, health care, and the availability of accessible housing. In particular, the dramatic increase in the number of very elderly will require both an increase in the capacity of institutions providing long term care, and an increase in services which will allow the elderly to remain independent for extended periods of time.

Graph 2.b



2.3 Households

Change in the number of households is related to population growth and trends in household size (persons per household). Household growth during the 1970s and 1980s has been more rapid than population growth due to a decline in average household size. It is useful to examine household growth in addition to population growth, because of the impacts that patterns of household formation and size have on the demand for hard and soft services.

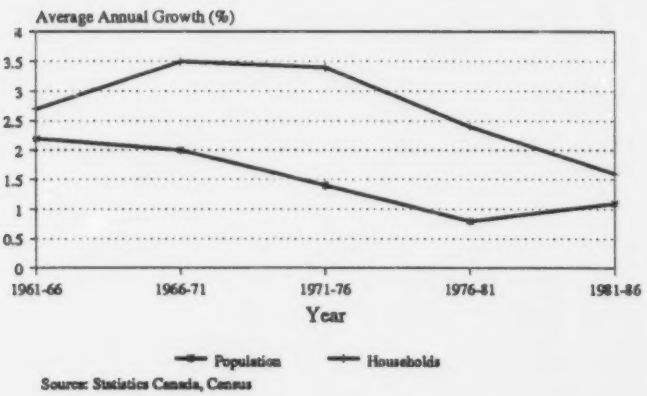
Growth

There were 3,221,700 households in Ontario in 1986, 8.5 percent more than 1981. The average annual rate of growth declined from 3.5 percent in the 1966-71 period to 1.6 percent in the 1981-86 period. Slower rates of household growth since 1971 are related to decreases in the rate of growth in the population. However, household growth has remained higher than population growth due to declines in household size which occurred during the 1970s. The difference between population and household growth narrowed in the 1981-86 period due to more moderate declines in household size.

Rapid household growth has occurred since 1986, in response to rapid population growth generated by high levels of migration, and to a baby boom-driven increase in household formation. This increase in population and household growth rates is most evident in the Greater Toronto Area, the destination for many new households.

Graph 2.c

Population and Household Growth Rates
Ontario, 1961-1986



Source: Statistics Canada, Census

There were 155,600 households in the Region in 1986, 5.7 percent more than in 1981. As in Ontario, the average annual rate of growth was lower in the 1981 to 1986 period than in the 1976 to 1981 period due to less rapid declines in average household size. A healthy residential construction market in Hamilton-Wentworth provides evidence that, as in Ontario, strong population and household growth occurred in Hamilton-Wentworth in the 1986 to 1988 period.

Table 2.iv

Population and Household Growth
Hamilton-Wentworth, 1976-86

	Households	Population
1976	136,100	409,500
1981	147,200	411,400
% Average Annual Growth 1976-1981	1.6	0.1
1986	155,600	423,400
% Average Annual Growth 1981-86	1.1	0.6

Source: Statistics Canada, Census

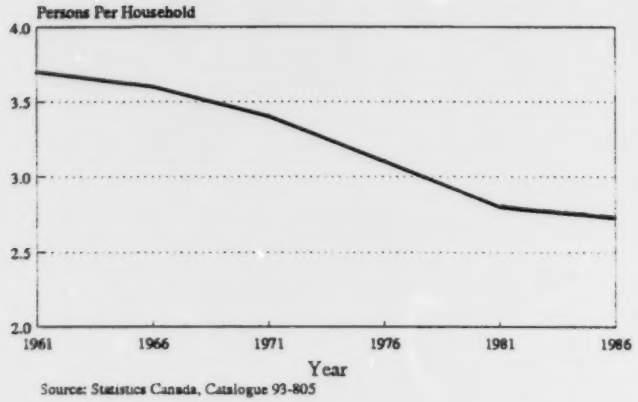
Size

The average number of persons per Ontario household was 2.8 in 1986, down from 3.7 in 1961. This 24 percent decline in household size resulted in a rate of household growth that was markedly faster than population growth over the 25 year period. The decline in average household size was most rapid during the 1971-81 period, dropping from 3.4 persons per household to 2.8.

Average household size in Hamilton-Wentworth was also characterized by decreases, declining from 3.0 in 1976 to 2.8 in 1981 to 2.7 in 1986. Changes in household size have occurred because of the increasing proportion of non-family households in the population and the smaller size of both family and non-family households. These changes are related to changes in societal attitudes, economic conditions, and the demographic characteristics of the population. Some government policies may also have a limited effect.

Graph 2.d

Household Size
Ontario 1961-1986



Source: Statistics Canada, Catalogue 93-805

Changing attitudes towards alternatives to the traditional family unit, combined with opportunities created by an increasingly affluent population, have led to increasing numbers of non-family households. As non-family households are smaller than family households, this has a depressing effect on household size. The growing number of widowed elderly living alone has also influenced the number of non-family households in the population.

Table 2.v

Growth of Family and Non-Family Households
Hamilton-Wentworth, 1976 - 1986

Household Type	1976	1981	1986	% CHANGE 1976 - 1986
Family Household	107,100	109,200	113,800	6.3
Non-Family Household	29,100	38,000	41,800	43.6
Total	136,200	147,200	155,600	14.2

Source: Statistics Canada, Census

In addition to growth in the number of non-family households, the average size of both family and non-family households has declined. This has further depressing effects upon household size. Factors such as low fertility rates, increasing divorce rates, the dramatic growth in persons living alone, and the impact of an aging population have contributed to this decline.

Table 2.vi

Size of Family and Non-Family Households
Hamilton-Wentworth, 1976-1986

	1976	1981	1986
Family Households	3.3	3.2	3.1
Non-Family Households	1.7	1.4	1.4
Total	3.0	2.8	2.7

Source: Statistics Canada, Census

Headship Rates

The age-sex composition of the population influences the rate of household formation, thus impacting upon household size. The impact of the age distribution is best illustrated through the concept of headship rates. Headship rates measure propensity of the population to form households. Thus, the higher the headship rate, the more households in the population. For example, the headship rate in Hamilton-Wentworth in 1986 was

$$\text{Headship Rate} = \frac{\text{Number of Households} \times 100}{\text{Population 15 years of age and over}}$$

$$= \frac{155{,}600 \times 100}{340{,}825}$$

$$= 45.7\%$$

As one progresses through the lifecycle, the likelihood that one will head a household changes. For example, in Ontario in 1986, only 13 percent of males 15 to 24 were household heads, compared to 68 percent of males aged 25 to 34. This jump in headship rates reflects the desirability and feasibility of household formation at this lifecycle stage. For males, the headship rate increases to 88 percent at age 45-54, then declines moderately. On the other hand, the headship rate for women does not increase dramatically until after age 55, when the death of a spouse often results in the female heading the household (Foot, 1986).

Table 2.vii Household Headship Rates* by Sex and Age of Household Head Ontario, 1961-1986

	1961	1966	1971	1976	1981	1986
Females						
15-24	1.3	2.2	3.8	7.1	9.8	9.5
25-34	3.5	4.7	8.1	13.4	21.9	24.1
35-44	5.8	6.6	8.5	12.2	19.7	23.4
45-54	11.4	11.9	12.6	14.8	20.4	22.5
55-64	20.0	22.6	22.0	24.0	26.5	27.5
65+	33.7	36.6	38.6	42.5	44.9	45.4
Total	10.5	11.6	13.4	17.0	22.5	24.6
Males						
15-24	13.5	14.8	17.6	18.6	16.2	12.8
25-34	71.7	76.7	79.3	79.9	75.2	67.9
35-44	84.3	87.1	89.8	90.8	87.4	84.2
45-54	86.8	89.4	91.0	91.6	89.0	87.7
55-64	84.6	87.8	89.5	90.8	88.0	87.6
65+	76.4	78.6	80.2	82.3	80.8	81.7
Total	67.3	67.9	68.3	69.1	66.8	65.7
Both Sexes Total	38.8	39.5	40.5	42.6	44.1	44.5

Source: Foot (1986) and Statistics Canada, Census

*** Note: "Household headship rate" refers to the percentage of the population of a particular cohort who are considered household maintainers, where a household maintainer is the person, or one of the persons, in the household who pays the rent, or the mortgage, or electricity, etc. for the dwelling. If such a person is not present in the household then Statistics Canada assigns a person as household head.**

The age structure of the population impacts upon household growth as a result of differential headship rates. For example, in the 1980s, the bulk of the baby boom was between 25 and 44 years of age. As this cohort has a higher headship rate than the 15 to 24 year cohort, large increases in household formation occurred. In the 1990s, because the baby boom will be replaced by the smaller cohort following them, there will a decrease in the number of households headed by 25 to 44 year olds. This will have a depressing effect upon the rate of household growth. At the same time, the aging of the baby boom will lead to an increase in the number of older households, which tend to be somewhat smaller than households headed by younger adults. (Foot, 1986)

Projections

The number of households in Hamilton-Wentworth is projected to increase from 161,100 to 193,500, or 20 percent, between 1988 and 2006. The largest increase (57%) occurs in households headed by 45-59 year olds. The average annual rate of household growth will decrease from 1.5 percent between 1988 and 1991 to 0.8 percent between 2001 and 2006. The average household size is projected to decline from 2.7 to 2.5 as a direct result of the aging of the population.(1)

Table 2.viii

Household Projections
Hamilton-Wentworth, 1988-2006

Age	1988 Hhlds.	%	1996 Hhlds.	%	2006 Hhlds.	%	% change 1988-2006
15-24	7,800	4.8	7,000	3.9	7,500	3.9	-4
25-44	66,900	41.5	71,300	40.2	66,400	34.3	-1
45-59	37,300	23.2	44,200	24.9	58,700	30.3	57
60-64	13,400	8.3	12,100	6.8	14,600	7.5	9
65+	35,700	22.2	42,900	24.2	46,300	23.9	30
Total	161,100	100.0	177,500	100.0	193,500	100.0	20

Source: Hamilton-Wentworth Planning and Development Department.

The age of household maintainers is an important factor in determining housing requirements. For example, 52 percent of household maintainers aged 25-34 in Ontario occupy rental accommodation, compared to 36 percent of the total population 15 and over (Census, 1986). Thus, the projected decline in the number of households headed by young adults between 1996 and 2006 should ease the demand for rental accommodation. The increasing number of households headed by 45-59 year olds and by those over 65 years of age will increase the demand for housing appropriate to the means and needs of these groups. More detailed analysis of the housing requirements of various cohorts, and the impact of projected demographic trends upon demand, should be conducted.

(1) Note: Household projections are subject to uncertainty. The household projections used assume that the age specific propensity to form households for those under the age of 65 will remain constant throughout the projection period. Although this anticipates the effects upon household formation of an older population, it does not anticipate the impact of changing living standards, attitudes, public policies, etc. The rate of household formation would also be influenced by use of different population growth scenarios. These possibilities will be examined as part of a housing strategy to be undertaken in 1989.

2.4 Area Municipal Growth

Area Municipal growth projections are subject to more uncertainty than Regional growth projections because, in addition to factors influencing migration to the Region, local factors play a role in determining the relative growth of the municipality. These local factors include neighbourhood characteristics, characteristics of new development, neighbourhood capacity and household size, availability and location of serviced land, perceived attractiveness (image), and momentum. Historic migration flows to the area municipalities and factors that may influence migration in the future are documented in Appendix A.

All municipalities will experience the effect of the aging of the population upon natural increase. There will be more deaths and less births as the size of the elderly cohort increases and the size of the cohort of women in their childbearing years decreases. However, the process of the aging of the population in each municipality, and the consequent impact upon natural increase, will be either mitigated or reinforced by migration flows.

In Ancaster, Flamborough, and Stoney Creek, positive in-migration over the projection period will mitigate the effects of the aging of the population upon growth rates. Population growth between 1988 and 2006 is projected to be 81 percent in Ancaster, 43 percent in Stoney Creek, and 39 percent in Flamborough, compared to 12 percent growth in the Region. However, in spite of positive migration throughout the projection period, the rate of growth in Stoney Creek, Ancaster, Glanbrook and Dundas is projected to decline between 1988 and 2006. An increase in migration over the projection period contributes to steady rates of growth in Flamborough.

In Hamilton, on the other hand, migration patterns combine with an aging population to slow growth. The annual rate of growth is projected to reverse from 0.3 percent between 1988 and 1991 to -0.1 percent between 2001 and 2006. The City will experience slower natural increase as annual births drop from approximately 4,000 to approximately 3,000, due to baby boomers moving out of the childbearing years. Migration is projected to be less negative than in the past, due to quality of life improvements, a good housing stock and a decline in the proportion of the most mobile (25-44) in the population.

Projected household growth in the Area Municipalities will vary according to projected population growth and declines in household size. In all municipalities, average household size is projected to decline between 1988 and 2006 in order to accommodate an aging Regional population.

The population forecasts for the Area Municipalities reflect likely ranges under high, low and medium Regional migration scenarios. Local factors play a determining role in area municipal growth. Developments with a significant local impact were considered in the scenarios, but where the impact is uncertain, municipal growth beyond the range projected is possible.

Municipality: Ancaster

1988 Population: 19,700

1988 Households: 6,300 *(estimated)*

2006 Population: 27,800-39,200 *(Projected Range)*
35,800 *(Most Likely)*

2006 Households: 12,300

Growth Characteristics: Ancaster experienced rapid and increasing rates of growth during the 1980s as a result of a positive community image, attractive neighbourhoods, and good highway access. The average annual rate of population growth is projected to remain above 2.5 percent per annum under the most likely scenario.

The average annual rate of household growth will remain above the rate of population growth throughout the period as average household size declines from approximately 3.2 in 1988 to approximately 2.9 in 2006. The growth of the planned community of Meadowlands and of other popular neighbourhoods will enable Ancaster to accommodate the high rates of population and household growth projected.

Higher levels of migration to Ancaster could result in a 2006 population of 39,200. For this to occur, the Region as a whole must experience an improvement in intraprovincial migration levels as a result of aggressive implementation of measures to improve its quality of life and hence its competitive position. Under this scenario, Meadowlands and other developments in Ancaster experience sustained rapid growth. Enhanced service and infrastructure provision will be required to accommodate this level of growth.

The low migration scenario to Ancaster projects a 2006 population of 27,800. Growth under this scenario would be considerably lower than growth experienced in recent years. Slower growth would reflect delays in major developments and low levels of international, interprovincial and intraprovincial migration to the Region.

Under the most likely scenario, there will be a projected increase of 53 percent in the number of children (0-19) in Ancaster between 1988 and 2006, of 93 percent in the number of adults (20-64) and of 102 percent in the number of individuals 65 and over.

Municipality: Dundas

1988 Population: 20,640

1988 Households: 7,300 *(estimated)*

2006 Population: 20,500-23,400 *(Projected Range)*
22,000 *(Most Likely)*

2006 Households: 8,500

Growth Characteristics: The population of Dundas is projected to increase modestly, from 20,600 in 1988 to 22,000 in 2006. The average annual rate of population growth will decline from 0.6 percent between 1988 and 1991 to 0.2 percent between 2001 and 2006.

The number of households in Dundas is projected to increase from 7,300 to 8,500 (16 percent) between 1988 and 2006. Household growth will be faster than population growth as a result of continuing declines in average household size. Average household size is projected to fall from 2.8 in 1988 to 2.6 in 2006 as a result of the aging of the population. The impact of the aging of the population upon household size, and the extent of redevelopment and intensification in the Town, will be determinants of future growth, as there is little land available for new residential development.

The projected 2006 population range for Dundas is narrow, reflecting the stability of this established community.

The proportion of individuals 65 and over in Dundas is 16 percent, (compared to 13 percent in the Region) as a result of the attractiveness of this town to older cohorts. The population will age further over the projection period, as the number of children (0-19) is projected to decline by 9 percent under the most likely scenario while the number of individuals 65 years of age and over increases 18 percent.

Municipality: Flamborough

1988 Population: 27,100

1988 Households: 8,700 *(Estimated)*

2006 Population: 33,400-44,300 *(Projected Range)*
37,700 (Most Likely)

2006 Households: 13,300

Growth Characteristics: Flamborough is projected to experience a level of growth considerably higher than recent years, as servicing constraints on the Waterdown urban area are removed. The area is projected to attract an influx of migrants from the Burlington to Toronto urban complex. A determinant of future growth, therefore, will be the extent of growth in the Toronto commutershed, and the competitive advantages of residing in Hamilton-Wentworth rather than other Regions surrounding Toronto.

Waterdown will receive much of the projected growth, increasing pressure upon existing urban services and infrastructure. Development in rural communities such as Carlisle offer alternative lifestyle opportunities, although the impact of such development upon overall population will likely be marginal. Average household size is projected to decline from approximately 3.1 in 1988 to 2.8 in 2006.

The low migration scenario anticipates a 2006 population of 33,400. This projection foresees less rapid growth in Waterdown. The high migration scenario anticipates a 2006 population of 44,300. This may occur if the pressures upon the Toronto housing market continue to mount, and if the Region's quality of life improvements and competitive position attract larger numbers of intraprovincial movers.

Under the most likely scenario, growth will occur in all age cohorts, with a 21 percent increase in the number of children (0-19), a 48 percent increase in the number of adults 20-64, and a 44 percent increase in the number of individuals 65 and over.

Municipality: Glanbrook

1988 Population: 9,500

1988 Households: 3,000 *(Estimated)*

2006 Population: 10,400-12,800 *(Projected Range)*
11,800 *(Most Likely)*

2006 Households: 4,600

Growth Characteristics: Glanbrook's population is projected to increase from 9,500 in 1988 to 11,800 in 2006 under the most likely scenario. The number of households is projected to increase from approximately 3,000 in 1988 to 4,600 in 2006 (53 percent) as a result of projected population growth under the most likely scenario and a decline in household size from 3.1 to 2.5. Much of the development to accommodate this growth is anticipated to occur along the Glanbrook-Hamilton border. The planned development of two retirement communities, with a combined capacity of 1,000 units, will contribute to the large declines in household size.

The low growth scenario in Glanbrook represents a levelling off from the population decreases which characterized the municipality during the 1980s. This scenario may occur in the context of slow Regional growth. The high growth scenario projects a 2006 population of 12,800, due to increased local employment at Centres such as the Airport and the Airport Industrial Business Park, and to the development of specialized retirement communities.

Under the most likely scenario, age-specific growth in Glanbrook is projected to occur amongst 0-19 year olds (5 percent), 20-64 year olds (14 percent), and amongst those over 65 (160 percent). The rapid growth of the elderly cohort is directly related to the establishment of retirement communities in Glanbrook. These developments will attract migrants from other municipalities in Hamilton-Wentworth and the surrounding area.

Municipality: Hamilton

1988 Population: 307,200[1]

1988 Households: 121,000 *(Estimated)*

2006 Population: 300,800-315,000 *(Projected Range)*
310,700[1] *(Most Likely)*

2006 Households: 131,200

Growth Characteristics: The population of the City of Hamilton is projected to increase from 307,200 in 1988 to 310,700 in 2006. Migration losses are projected to be more moderate than those which occurred in the 1971-1986 period (see tables A.2, A.4) because of employment growth in the Regional Centre, improvements in the quality of life, the existence of a good housing stock, and a decrease in the size of the most mobile segment of the population. The aging of the population over the forecast period will be accompanied by decreasing numbers of births, increasing numbers of deaths, and slower growth.

There will be an increase of 10,200 households in the City under the "most likely" scenario, as average household size declines from 2.5 to 2.4. Home to work commuting patterns between the City of Hamilton and other municipalities in the Region, and between the City of Hamilton and municipalities outside of the Region, will be factors which influence future population and household growth.

The high migration scenario projects a population of 315,000 in 2006. This scenario anticipates an increase in the proportion of international migration to Hamilton, and is dependent upon the availability of community support services appropriate to immigrant groups destined for Canada. This scenario also anticipates aggressive implementation of quality of life improvements and adoption of a progressive housing strategy sensitive to demographic issues such as an aging population and the issues surrounding declining populations in city cores.

The low migration scenario projects a 2006 population of 300,800. This reflects large migration flows to other growth areas within and outside of the Region as the result of a failure to diversify within the local economy, and of a failure to implement infrastructure and quality of life improvement projects (such as the Waterfront Park) in the City.

Age specific growth under the most likely scenario will be concentrated amongst individuals 65 years of age and over. This cohort is expected to grow by 17 percent. The number of 20-64 year olds is forecast to approximate 1988 levels and the number of chidren is forecast to decline by 6 percent.

[1] Does not include the population of McMaster University.

Municipality: Hamilton (continued)

	Lower City	Upper City
1988 Population:	186,600	120,600
1988 Households: *(estimated)*	78,500	42,500
2006 Population: *(estimates based on most likely growth scenario)*	177,200	133,500
2006 Households:	80,000	51,200

Growth Characteristics: The population below the escarpment in the City of Hamilton is projected to decline from 186,600 in 1988 to 177,200 in 2006 as a result of a continuing decline in household size combined with a limited supply of land available for new development. Average household size is projected to decline from 2.4 in 1988 to 2.2 in 2006 as a result of the aging of the population.

The number of households in the lower city is projected to increase from 78,500 to 80,000 (1.9 percent). This increase will likely occur in the early part of the projection period. In the latter half of the projection period, the possiblity of an increase in vacancy rates may result in a decline in the number of households occupying the existing rental stock.(1)

Infill development, redevelopment, and renovations to existing buildings will play important roles in ensuring that the housing stock in the lower city remains appropriate to the changing demographic characteristics of the population.

The population above the escarpment in the City of Hamilton is projected to increase from 120,600 in 1988 to 133,500 in 2006 (11 percent). The rate of population growth will decline in the latter part of the projection period as the rate of natural increase slows.

The number of households in the upper city is projected to increase to 51,200 in 2006 from an estimated 42,500 in 1988. The rate of household growth is faster than the rate of population growth as a result of a projected decline in average household size from 2.8 to 2.6.

(1) Increased vacancy rates may accompany the projected decreases in the number of 25-34 year olds, whom have a high propensity to rent. If the vacancy rate in the lower city were to increase from its present low level to 4 percent, the number of additional units required to accommodate a fixed number of households would be approximately 1,500.

Municipality: Stoney Creek

1988 Population: 45,300

1988 Households: 14,800 *(estimated)*

2006 Population: 59,000-67,800 *(Projected Range)*
64,600 *(Most Likely)*

2006 Households: 23,600

Growth Characteristics: Stoney Creek's population is projected to increase 43 percent over the projection period, to 64,600 in 2006. The rate of population growth is projected to moderate, to 1.5 percent average annual growth between 2001 and 2006 from 2.6 percent between 1988 and 1991. The number of households is projected to increase by 59 percent, to 23,600 in 2006.

Stoney Creek is projected to receive a large share of future Regional growth. This growth reflects: a good housing mix; a supply of developable land; the growth of employment opportunities within the Industrial Business Park; and, improved access to the Burlington to Toronto employment corridor as the result of the twinning of the Skyway and the construction of the North-South, East-West Expressway.

In the past, the City of Hamilton has been the source of many migrants to Stoney Creek. As migration from Hamilton to other Area Municipalities is projected to moderate, a determinant of Stoney Creek's future growth will be its attractiveness to commuters employed in the Toronto centred area. Another determinant of future growth will be the rate at which existing residentially designated lands are made available for development.

The high migration scenario projects a 2006 population of 67,800 persons. This scenario assumes an improved competitive position of Hamilton-Wentworth vis-a-vis other Regions and the early completion of the North-South, East-West Expressway. The low migration scenario projects a 2006 population of 59,000. Under this scenario Stoney Creek experiences smaller gains from intra-Regional migration as a result of lower levels of out migration from the City of Hamilton and of increased competition from other municipalities in the Region.

Stoney Creek will experience growth in all broad age groups under the most likely scenario: the number of children (0-19) will increase 19 percent; the number of adults (20-64) will increase 50 percent; and, the number of seniors (65+) will increase 75 percent.

Table 2.ix

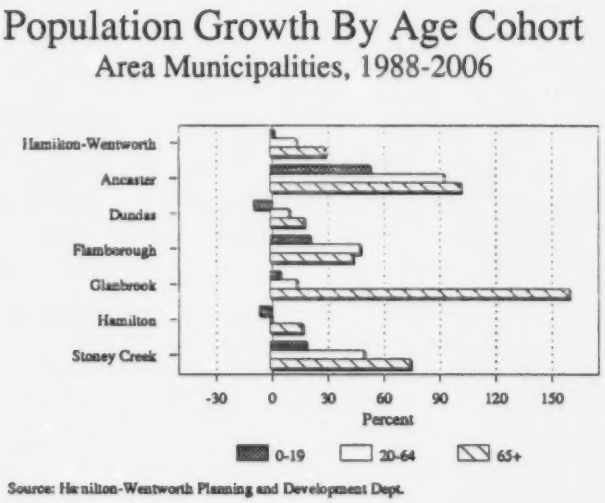
Population Projections
Area Municipalities, 2006

	1988 Assessment	Low	Most Likely	High
Ancaster	19,700	27,800	35,800	39,200
Dundas	20,600	20,500	22,000	23,400
Flamborough	27,100	33,400	37,700	44,300
Glanbrook	9,500	10,400	11,800	12,800
Hamilton (1)	307,200	300,800	310,700	315,000
Stoney Creek	45,300	59,000	64,600	67,800
REGION	429,000	452,000	483,000	503,000

(1) Figures do not include population residing on campus at McMaster University.

Source: Ontario Ministry of Revenue, Assessment Division and The Hamilton-Wentworth Planning and Development Department.

Graph 2.e



Source: Hamilton-Wentworth Planning and Development Dept.

2.5 Policy Review

Projections of population and household growth contained in this report have implications for Regional Departments such as Engineering, Economic Development, Planning, Finance, and Health.

Issues related to population growth and demographic change include:

Migration Issues

- quality of life improvements will have an important impact upon migration
- an increasing immigrant population will affect demand for education, health, social and cultural services
- Area Municipal growth will be influenced by local and regional quality of life considerations

Labour Market Issues

- a slower rate of population growth will result in slower labour force growth
- a slower rate of labour force growth will result in pressure to increase labour market participation of particular groups and to maintain high levels of immigration
- the emergence of an aging workforce will require workplace adjustments
- an aging population will shape future demand for consumer products and, to some extent, future growth industries

Housing Issues

- a population characterized by a changing age distribution will have different housing requirements (size, type, tenure, location, amenities)
- planning for a changing age distribution may require planning for special housing (eg. retirement villages)
- declining rates of population growth will be a factor in future demand for residential land

Service Issues

- the decline in the number of children after 1996 will impact upon particular services, including educational services
- the decline in the size of the 25-34 year cohort may reduce rental pressures
- rapid growth in the number of 40-64 year olds will increase demand for particular leisure, health, educational, and social services
- growth in the number of seniors will impact services such as transit passes, health care and availability of accessible housing

- rapid growth of the old elderly will require increased capacity of institutions and more services supportive of independent living
- the distribution of growth by area municipality will affect demands for transportation and infrastructure improvements and for services provided at a local level

Future Issues (beyond 2006)

- the proportion labour force aged population to total population will decline as individuals in the baby boom turn 65. This will begin around year 2015. An increasing dependency ratio will increase pressures upon pensions, volunteer networks, and other systems affected by the proportion of individuals of labour force age in a population.

Appendices

Appendix A

Intraregional Migration

1. Area Municipal Assumptions
2. Summary Table - Natural Increase, Net Migration and Growth in the Area Municipalities
3. Area Municipal Assumptions, 1981 Review
4. Future Migration Assumptions
5. High, Medium and Low Growth Projections

A.1 Area Municipal Assumptions

Population growth will vary according to the rate of natural increase and level of net migration in each municipality.

Natural Increase

The assumptions developed for fertility and mortality rates within Hamilton-Wentworth were used in projecting Area Municipal growth. The rate of natural increase therefore, varies from municipality to municipality only according to the age structure of the population.

All municipalities are likely to experience decreased rates of natural increase in the future as the proportion of elderly in the population increases.

Migration

Migration levels in the Area Municipalities will depend upon:

- the extent of growth experienced in Hamilton-Wentworth;
- the share of net migration to the Region destined for the municpality; and,
- the attraction of the municipality to movers within the Region.

Table A.2 estimates past net migration flows by subtracting natural increase from total population change for four periods between 1971 and 1988. Table A.3 compares migration of the 1981-1986 and 1985-1988 periods to projections contained in the 1981 Review. Table A.4 documents high, low and most likely migration scenarios for the area municipalities

A.2 Summary Table

Natural Increase, Net Migration and Growth in the Area Municipalities

		Ave. Annual Natural Inc.	Ave. Annual Net Migration	Ave. Annual Growth #	Ave. Annual Growth %
H-W	1971-76	2,675	-1,022	1,651	0.4
	1976-81	2,258	-1,867	391	0.1
	1981-86	2,515	-127	2,387	0.6
	1985-88	2,500	900	3,400	0.8
Ancaster	1971-76	73	-239	-166	-1.1
	1976-81	77	-43	35	0.2
	1981-86	133	434	567	3.6
	1985-88	130	930	1,060	5.9
Dundas	1971-76	52	36	88	0.5
	1976-81	35	46	81	0.4
	1981-86	60	46	106	0.5
	1985-88	60	125	185	0.9
Flamborough	1971-76	206	327	530	2.4
	1976-81	215	-37	178	0.7
	1981-86	220	114	334	1.3
	1985-88	220	305	525	2.0
Glanbrook	1971-76	89	-40	49	0.5
	1976-81	66	-148	-83	-0.8
	1981-86	63	-97	-35	-0.4
	1985-88	65	-50	16	0.2
Hamilton	1971-76	1,974	-1,408	566	0.2
	1976-81	1,549	-2,663	-1,114	-0.4
	1981-86	1,645	-1,587	59	0.0
	1985-88	1,645	-1,155	490	0.2
S. C.	1971-76	281	302	584	2.0
	1976-81	316	978	1,294	3.9
	1981-86	394	963	1,356	3.4
	1985-88	400	720	1,120	2.7

Sources: Statistics Canada, Census of Canada, and Province of Ontario, Vital Statistics and Ministry of Revenue, Assessment Division.

A.3 Area Municipal Assumptions - 1981 Review

Ancaster experienced average annual net in-migration of 434 persons between 1981 and 1986. A positive community image and attractive residential neighbourhoods contributed to the influx of migrants to this Municipality. The development of Meadowlands, a planned community expected to house more than 9,000 persons, will enable Ancaster to sustain high levels of in-migration throughout the projection period. The actual number of net migrants to Ancaster between 1981 and 1986 was lower than the projected in the 1981 Review because of a change of ownership of the Allarco lands where the planned Meadowlands community is located.

Dundas had moderate but steady levels of in-migration from 1971 to 1986. Net in-migration to Dundas between 1981 and 1986 averaged 46 net persons per year. Development and redevelopment opportunities sufficient to sustain this moderate level of migration through the projection period exist. The 1981 Review projected that Dundas would experience 0 net migration.

Flamborough experienced 114 average annual net in-migrants between 1981 and 1986, reflecting the popularity of the Waterdown urban area to commuters from employment centres both in Hamilton-Wentworth and in other Regions in the Toronto Centred Area. This level of net migration corresponds closely to the migration assumptions made in the 1981 Review. The extention of Regional sewers to Waterdown will increase pressure for development in this area.

Glanbrook experienced negative net migration averaging 97 persons per year between 1981 and 1986, a continuation of a negative migration trend evident between 1971 and 1981. This level of out-migration corresponds closely to the migration assumptions made in the 1981 Review. Future growth will be dependent upon development prospects in the urban areas of Mount Hope and Binbrook and along the Glanbrook/Hamilton boundary, upon the rate and extent of development in the Glanbrook and Airport Industrial Business Parks, and upon the development of planned retirement communities in the municipality.

Hamilton experienced high levels of negative net migration between 1971 and 1986, peaking in between 1976 and 1981 at an average of -2,663 net migrants per year. The trend toward smaller household size has affected the capacity population in the lower city, where there is little developable land. Net out-migration from Hamilton averaged 1,600 persons per year between 1981 and 1986, which is more rapid than the annual net out-migration of 875 persons assumed in the 1981 Review. Out-migration from the lower city will slow only once the decline in household size levels off.

Stoney Creek experienced average net in-migration of 963 persons per year between 1981 and 1986, fuelling a continuation of the rapid growth experienced between 1976 and 1981. The level of in-migration experienced in Stoney Creek over this period was higher than the 575 annual net migrants projected in 1981. In-migration may moderate in the future, although the existence of an expanding Industrial-Business Park, a good housing mix, a supply of developable land, and improved Toronto access through the twinning of the Skyway bridge and construction of the N-S E-W Expressway will contribute to sustained positive in-migration.

Table A.4

Area Municipal Assumptions
Average Annual Migration

	A.A., 1981-86	A.A.,1985-88	Most Likely	High	Low
Ancaster	435	930	800	970	450
Dundas	45	125	80	120	10
Flamborough	115	305	400	735	200
Glanbrook	-95	-50	40	100	-10
Hamilton	-1585	-1155	-650	-450	-1060
Stoney Creek	965	720	800	950	600
Region	-120	875	1470	2425	190

Table A.5

MOST LIKELY SCENARIO

Projected Population and Average Annual Growth (A. A. G.)

Region and Area Municipalities, 1988-2006

	Ancaster	Dundas	Flamborough	Glanbrook	Hamilton	Stoney Creek	Region
Assessment, 1988	19,730	20,640	27,120	9,490	307,160	45,330	429,500
Projected, 1991	22,400	21,000	28,900	10,000	310,200	49,000	442,000
A. A. G., 1988-1991 (%)	4.2	0.6	2.1	1.7	0.3	2.6	1.0
Projected, 1996	26,700	21,400	31,500	10,700	312,600	54,700	458,000
A. A. G., 1991-1996 (%)	3.5	0.4	1.7	1.4	0.2	2.2	0.7
Projected, 2001	31,400	21,800	34,400	11,400	312,500	60,000	472,000
A. A. G., 1996-2001 (%)	3.2	0.4	1.8	1.3	0.0	1.8	0.6
Projected, 2006	35,800	22,000	37,700	11,800	310,700	64,600	483,000
A. A. G., 2001-2006 (%)	2.6	0.2	1.8	0.7	-0.1	1.5	0.5

Source: Ministry of Revenue, Assessment Division and Hamilton-Wentworth Planning and Development Department

Table A.5

LOW MIGRATION SCENARIO

Projected Population and Average Annual Growth (A. A. G.)

Region and Area Municipalities, 1988-2006

	Ancaster	Dundas	Flamborough	Glanbrook	Hamilton	Stoney Creek	Region
Assessment, 1988	19,730	20,640	27,120	9,490	307,160	45,330	429,470
Projected, 1991	21,700	20,700	28,400	9,800	308,100	48,100	437,000
A. A. G., 1988-1991 (%)	3.2	0.1	1.5	1.1	0.1	2.0	0.6
Projected, 1996	24,000	20,900	30,100	10,100	308,000	51,900	445,000
A. A. G., 1991-1996 (%)	2.0	0.2	1.2	0.6	0.0	1.5	0.4
Projected, 2001	26,000	20,700	31,800	10,300	306,000	55,500	450,000
A. A. G., 1996-2001 (%)	1.6	-0.2	1.1	0.4	-0.1	1.3	0.2
Projected, 2006	27,800	20,500	33,400	10,400	300,800	59,000	452,000
A. A. G., 2001-2006 (%)	1.3	-0.2	1.0	0.2	-0.3	1.2	0.1

Source: Ministry of Revenue, Assessment Division and Hamilton-Wentworth Planning and Development Department

Table A.5

HIGH MIGRATION SCENARIO

Projected Population and Average Annual Growth (A. A. G.)

Region and Area Municipalities, 1988-2006

	Ancaster	Dundas	Flamborough	Glanbrook	Hamilton	Stoney Creek	Region
Assessment, 1988	19,730	20,640	27,120	9,490	307,160	45,330	429,000
Projected, 1991	23,200	21,400	30,400	10,100	311,800	49,200	446,000
A. A. G., 1988-1991 (%)	5.4	1.2	3.8	2.1	0.5	2.7	1.3
Projected, 1996	28,400	22,200	34,800	11,100	314,900	56,100	468,000
A. A. G., 1991-1996 (%)	4.0	0.7	2.7	1.9	0.2	2.6	1.0
Projected, 2001	33,700	22,900	39,600	12,000	315,500	61,800	486,000
A. A. G., 1996-2001 (%)	3.4	0.6	2.6	1.6	0.0	1.9	0.8
Projected, 2006	39,200	23,400	44,300	12,800	315,000	67,800	503,000
A. A. G., 2001-2006 (%)	3.0	0.4	2.2	1.3	0.0	1.9	0.7

Source: Ministry of Revenue, Assessment Division and Hamilton-Wentworth Planning and Development Department

Appendix B

Summary of National, Provincial and Regional Projections

1. Larger Area Projections

2. Regional Population Projections

B.1 Larger Area Projections

DOCUMENT	AUTHOR	METHOD	ASSUMPTIONS	PROJECTED GROWTH	SELECTED HIGHLIGHTS
Population Projections for Canada, Provinces and Territories 1984-2006	Statistics Canada.	Cohort Survival	**Fertility - Low:** decline from 1.7 children/woman to 1.4 by 1996 and constant after. **Medium:** remain at 1.7. **High:** Increase to 2.2 by 2006. **Migration:** net immigration projected to remain at an average of 50,000/year with 47% destined for Ontario. Net Interprovincial migration projected to decrease considerably (to 22,000 from 1986 to 1991 and 10,000 from 1991-1996). **Mortality:** differential life expectancies of males and females projected to narrow.	If the declining fertility and current low international migration continue, Canada's rate of population growth would fall from 1% to near-zero by 2006.	The predominant labour force group (18-64) is expected to increase from 16 million to19 million by 2006. Provincial population shares expected to alter little; Ontario's share would increase from 35% to 35-37% in 2006.
Ontario Population Projections 1984-2006	MTE	Cohort Survival	**Fertility Low:** decline to 1.36 (current level in Germany and Austria) by 2006. **Medium:** Slight gain to 1991 then levelling off. **High:** Gradual increase to 2.1 (Replacement level) by 2006. **Migration:** net interprovincial migration assumed to decline from high levels of 1980s. Medium- 31,000 net in-migrants / year **Mortality:** continued sig. reductions for infants, small declines for 1-49 age group, reduced mortality for 50+ ages due to improved treatment of cancer and healthier lifestyles.	0.7% per year average compared to 1.8% per year from 1956 to 1983. 1.0% / yr 1986-91 0.7% / yr 1991-96 0.5% / yr 96-2001 0.4% / yr 2001-06	Median age of population will increase from 30 to 39 years by 2006. Fastest growth areas will continue to be those surrounding Toronto, especially Peel and York. Hamilton-Wentworth to grow at a rate of 0.5 to 0.9% per year.
Ontario Population Projections 1986-2006	MTE	Cohort Survival	**Fertility:** little change from 1984 projections **Migration:** revised upwards to reflect higher levels of Canadian immigration as implied in federal policy. Medium 39,000 net in-migrants / yr. **Mortality:** same as 1984 projections.	1.1% / yr 1986-91 0.8% / yr 1991-96 0.7% / yr 96-2001 0.4% / yr 2001-06	Growth rates will decline over proj. period due to a slowdown in the rate of natural increase. Births will peak in the late '80s, then decline as the baby boom generation moves out of the childbearing yrs. Deaths will inc. steadily as more of the population moves into old age.
Ontario Population Projections 1989-2011	MTE	Cohort Survival	**Fertility:** constant at 1.678 **Migration:** short term projected to be almost 70,000 net migrants to Ontario Long term projected to be 48,000 net migrants to Ontario, similar to historic average. **Mortality:** survival rates of all age groups revised upward to reflect expectation that life expectancy will continue to improve.	1.7% / yr 1986-91 1.2% / yr 1991-96 0.9% / yr 96-2001 0.8% / yr 2001-06 0.7% / yr 2006-11	

B.2 Regional Population Projections

DOCUMENT	AUTHOR	METHOD	ASSUMPTIONS	PROJECTED GROWTH	SELECTED HIGHLIGHTS
Hamilton-Wentworth Population Projections 1981 Review	H-W 1981	Cohort Survival	**Fertilty- Low:** decline at slow rate to 1991 then constant to 2001. More rapid decline for those below 18 and over 35. Average age of childbearing will increase. **High:** decline slowly to 1991 then increase. **Migration:** range from 1500 to -400 per year, with most likely figure of 400.	.5% / yr 1986-91 .25% / yr 1991-96 .05% / yr '96-2001 to 445,000 by 2001 (MOST LIKELY)	Ancaster projected to double population by 2001 (4% / yr). Very little population change for Hamilton, Dundas or Glanbrook. Total population of Hamilton will represent about 10% less of total Regional population in 2001 than in 1980.
Population: Future Growth in the Hamilton-Wentworth Region.	Regional Official Plan Study 1975	Components of Growth (does not consider age-sex structure).	**Fertility:** most likely to stay at the average at the time of study (1.7% / thousand women). Does not consider age specific fertility rates. **Migration:** most likely to approximate average of past decade (annual changes ranged from 5440 in 1964 to -1107 in 1973).	1.3% / yr 1975-86 1.1% / yr '86-2001 (MOST LIKELY)	Provincial policy to encourage the redistribution of growth (COLUC) expected to impose an upper limit to growth in Hamilton-Wentworth by year 2000. Projections substantially lower than those of previous years.
Population, Labour Force, Households and Housing	Metro Toronto Planning Dept. 1984	Cohort Survival	**Fertility:** based on Canada and Ontario historical data. **Male:** total live births: 51.3 **Death Rates:** continual drop in death rates for all age groups, and especially those under 5 and over 65. Levelling off by 2001. **Migration:** net migration to Metropolitan Region high throughout projection period.	Metro Region: 1.4% / yr 1981-91 1.0% / yr 91-2001 0.9% / yr 2001-11 H-W: 1.0% / yr 1981-91 0.7% / yr 91-2001 0.5% / yr 2001-11 Metro Toronto: 0.2% / yr 1981-91 -.02% / yr 91-2001 -.14%/ yr 2001-06 (MOST LIKELY)	Once baby boom females and echo passed the child bearing ages, +ve natural increase (under current fertility assum.) will not continue. In Metro Region, -ve natural increase by 2016, in Metro Toronto by 2006. H-W: population share of Six Regions was 14.6% in 61, 12.1% in 71, and 10.8% in 81. Projected to decrease to 10.4% in 91, 10.0% in 2001, 9.7% in 2011, and 9.4% in 2021, as Durham, York, Peel, Halton increase their shares.
Region of Peel Planning Dept.	1981	Used control totals - those figures Regional Council has accepted as a base for their 5-year forecast. Then run Metro Model to determine age distribution.	**Mortality:** used Provincial historical trends and projections. **Fertility:** applied Provincial trends to Regional data.	3.2% / yr 1986-91 2.8% / yr 1991-96 2.4% / yr '96-2001 2.2% / yr 2001-'06 1.8% / yr 2006-11 (MOST LIKELY)	

B.2 Regional Population Projections (cont'd)

DOCUMENT	AUTHOR	METHOD	ASSUMPTIONS	PROJECTED GROWTH	SELECTED HIGHLIGHTS
Population and Employ-ment Forecasts - 1987 Review and Update	Durham Region 1987	Long range based on 1987 Ontario Demographic Forecast. Short range based on subdivision registrations, building permits, starts and completions.	Fertility assumptions, future Provincial growth based on 1987 Demographic Forecast. Metro Toronto area will absorb its historic 66% of Ontario's growth. Durham would maintain 16% of Toronto area growth Further decreases in household size limited.	4.5% / yr 1986-91 2.1% / yr. 1991-96 1.6% / yr. '96-2001 1.3% / yr 2001-'06 1.1% / yr 2006-'12 (MOST LIKELY)	Higher growth predicted than in 1986. Projections prepared in 1986 predicted higher growth than those prepared in 1984.
Population and Housing Forecast for the Niagara Region	Niagara Planning Depart. 1987	Provincial Ratio Method. Housing starts for Area Municipalities. Cohort Survival to determine Age-Sex Distribution.	Niagara growth rate will maintain its past relationship to Ontario's growth rate ie., following a trend similar to Ontario, but at a lower level. Fertility assumptions, future Provincial growth based on Ontario's 1984 Demographic Review. Net migration will increase over recent years.	+1.6% / yr 1986-91 +0.1% / yr 1991-96 -1.0% / yr '96-2001 (MOST LIKELY)	Housing construction rates expected to remain higher than population growth, but will decrease in future years. After 1996, the current low rate of population growth in Niagara will change to a slow reduction in total population due to the combination of lower birth rates and an older population.
Population Projections to the Year 2006 for the Region of Halton and Area Munic.	Region of Halton Planning and Develop. Dept. 1987	Metro Model. Review of projections for Halton & G.T.A. (COLUC,IBI) Engaged Consultant Considered infrastructure implications.	**Fertility:** used medium and low fertility assumptions generated by Metropolitan Toronto. **Mortality:** used Metro forecasts. **Other:** sensitivity of future population growth to resolution of servicing constraints is considered. Special migrant study generated information on historical migration, age and sex characteristics of net migrants to the Area Municipalities.	1.4% / yr 1986-91 1.7% / yr 1991-96 1.8% / yr '96-2001 1.6% / yr 2001-'06 1.4% / yr 2006-'11 (MOST LIKELY)	Strong competition for population and job growth will continue. Halton's growth share within the GTA will stabilize, increase slightly over the next 16-21 yrs. Existence of serviced land & major employers will continue to propell growth East of Metro.
Population and Employ-ment Growth	York Region 1987	Prepared for Planning Department Use - No Official Status		4.3% / yr 1986-91 4.7% / yr 1991-96 3.1% / yr 96-2001 (MOST LIKELY)	
Other Regions - as Projected by the Ontario Demo-graphic Bulletin 1984-2006	MTE 1984	There are numerous Regions in Ontario, excluding the four surrounding Metro Toronto, which are forecast by MTE to experience growth rates higher than Hamilton-Wentworth between 1983 and 1991.	Hamilton-Wentworth was forecast to experience a rate of growth of between 0.5 and 0.9 percent. Dufferin and Victoria 2-3% / yr Simcoe, Waterloo, Ottawa-Carelton, Wellington, Kenora, Middlesex, Muskoka, Prescott and Russell, Frontenac, Lanark, Parry Sound and Haliburton 1-2% per Year	Province: 1.0% / yr 1986-91 0.7% / yr 1991-96 0.5% / yr 96-2001 0.4% / yr 2001-06	Hamilton-Wentworth: .5% / yr 1986-1991 .27% / yr 1991-1996 .1% / yr 96-2001 -.2% / yr 2001-06 to 446,641 in 2001

Appendix C

Age Specific Projections for the Region and Area Municipalities - Five-Year Intervals

1. Region - Most Likely
2. Ancaster - Most Likely
3. Dundas - Most Likely
4. Flamborough - Most Likely
5. Glanbrook - Most Likely
6. Hamilton - Most Likely
7. Stoney Creek - Most Likely

Table C.1

Projected Population by Five-Year Age Groups and Sex, Selected Years, 1988-2006
Hamilton-Wentworth

Scenario 1.2 (Medium Fertility-Medium Migration)

	Assessment			Projected Population											
	1988			1991			1996			2001			2006		
Age Group	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-4	14,044	13,436	27,480	14,900	14,200	29,100	14,900	14,200	29,100	13,800	12,900	26,700	13,000	12,200	25,200
5-9	14,340	13,697	28,037	14,500	13,900	28,400	15,100	14,500	29,600	15,100	14,500	29,600	13,900	13,300	27,200
10-14	13,933	13,460	27,393	14,400	13,700	28,100	14,900	14,300	29,200	15,600	14,900	30,500	15,600	15,000	30,600
15-19	15,116	14,379	29,495	14,500	13,700	28,200	14,700	14,000	28,700	15,400	14,600	30,000	15,900	15,400	31,300
20-24	17,228	17,668	34,896	15,800	15,500	31,300	14,700	14,300	29,000	15,100	14,300	29,400	15,600	15,000	30,600
25-29	18,902	19,237	38,139	18,600	19,000	37,600	15,900	15,700	31,600	15,100	14,400	29,500	15,200	14,500	29,700
30-34	17,383	18,306	35,689	18,500	19,100	37,600	18,700	19,200	37,900	16,100	15,900	32,000	15,100	14,800	29,900
35-39	15,635	16,258	31,893	16,900	18,000	34,900	18,800	19,300	38,100	19,900	19,500	39,400	16,500	16,400	32,900
40-44	14,164	14,658	28,822	15,700	16,200	31,900	17,100	18,400	35,500	19,100	19,700	38,800	19,500	20,100	39,600
45-49	11,793	11,767	23,560	13,000	13,300	26,300	15,800	16,400	32,200	17,400	18,600	36,000	19,400	20,100	39,500
50-54	10,615	10,813	21,428	11,000	11,100	22,100	12,900	13,300	26,200	15,400	16,400	31,800	17,300	18,700	36,000
55-59	10,909	11,377	22,286	10,600	10,900	21,500	10,700	11,000	21,700	12,700	13,200	25,900	15,400	16,300	31,700
60-64	11,028	12,051	23,079	10,700	11,600	22,300	10,000	10,600	20,600	10,200	10,800	21,000	12,000	12,900	24,900
65-69	9,381	10,730	20,111	10,000	11,600	21,600	9,700	11,000	20,700	9,100	10,200	19,300	9,300	10,300	19,600
70-74	6,291	7,694	13,985	7,100	8,700	15,800	8,600	10,700	19,300	8,300	10,200	18,500	8,000	9,400	17,400
75-79	4,426	6,435	10,861	5,000	6,800	11,800	5,500	7,600	13,100	6,500	9,400	15,900	6,600	9,000	15,600
80-84	2,447	4,398	6,845	2,700	4,900	7,600	3,300	5,300	8,600	3,700	6,100	9,800	4,600	7,500	12,100
85+	1,598	3,870	5,468	1,700	4,200	5,900	1,900	5,000	6,900	2,300	5,600	7,900	2,800	6,400	9,200
Total	209,233	220,234	429,467	215,600	226,400	442,000	223,200	234,800	458,000	230,800	241,200	472,000	235,700	247,300	483,000

Source: Hamilton-Wentworth Planning and Development Department.

Table C.2

Projected Population by Five-Year Age Groups and Sex, Selected Years, 1988-2006
Ancaster

Scenario 1.2 (Medium Fertility-Medium Migration)

	Assessment			Projected Population											
	1988			1991			1996			2001			2006		
Age Group	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-4	774	719	1,493	725	705	1,430	735	710	1,445	845	815	1,660	1,000	960	1,960
5-9	877	774	1,651	1,005	940	1,945	985	965	1,950	1,010	985	1,995	1,105	1,075	2,180
10-14	803	731	1,539	980	885	1,865	1,255	1,190	2,445	1,240	1,220	2,460	1,255	1,225	2,480
15-19	781	702	1,483	925	820	1,745	1,155	1,060	2,215	1,430	1,365	2,795	1,405	1,390	2,795
20-24	667	595	1,262	685	615	1,300	895	795	1,690	1,125	1,035	2,160	1,410	1,350	2,760
25-29	494	513	1,007	570	500	1,070	630	565	1,195	865	755	1,620	1,080	990	2,070
30-34	619	766	1,385	655	740	1,395	765	695	1,460	850	785	1,635	1,050	950	2,000
35-39	889	963	1,852	965	1,120	2,085	990	1,075	2,065	1,125	1,065	2,190	1,165	1,105	2,270
40-44	888	888	1,776	1,120	1,125	2,245	1,260	1,420	2,680	1,285	1,380	2,665	1,410	1,345	2,755
45-49	703	620	1,323	860	855	1,715	1,260	1,275	2,535	1,400	1,565	2,965	1,435	1,532	2,967
50-54	541	516	1,057	635	595	1,230	920	915	1,835	1,310	1,335	2,645	1,445	1,620	3,065
55-59	504	502	1,006	525	525	1,050	670	640	1,310	945	960	1,905	1,325	1,370	2,695
60-64	473	490	963	505	505	1,010	525	545	1,070	670	660	1,330	925	970	1,895
65-69	415	404	819	455	475	930	475	505	980	500	545	1,045	630	650	1,280
70-74	260	246	506	330	320	650	410	460	870	430	490	920	450	525	975
75-79	164	161	325	180	205	385	260	285	545	325	410	735	345	435	780
80-84	80	112	192	100	110	210	115	160	275	175	230	405	215	325	540
85+	24	65	89	35	85	120	60	105	165	80	150	230	115	215	330
Total	9,961	9,767	19,728	11,255	11,125	22,380	13,365	13,365	26,730	15,610	15,750	31,360	17,765	18,032	35,797

Source: Ministry of Revenue, Assessment Division and Hamilton-Wentworth Planning and Development Department

Table C.3

Projected Population by Five-Year Age Groups and Sex, Selected Years, 1988-2006
Dundas

Scenario 1.2 (Medium Fertility-Medium Migration)

	Assessment			Projected Population											
	1988			1991			1996			2001			2006		
Age Group	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-4	666	644	1,310	645	615	1,260	605	570	1,175	585	555	1,140	570	545	1,115
5-9	693	673	1,366	690	665	1,355	660	635	1,295	630	600	1,230	620	590	1,210
10-14	639	615	1,254	695	670	1,365	690	675	1,365	675	650	1,325	645	615	1,260
15-19	752	702	1,454	675	625	1,300	700	670	1,370	695	675	1,370	680	655	1,335
20-24	706	669	1,375	725	680	1,405	655	600	1,255	670	645	1,315	685	660	1,345
25-29	726	730	1,456	715	665	1,380	700	660	1,360	625	575	1,200	640	615	1,255
30-34	733	846	1,579	725	810	1,535	740	690	1,430	730	685	1,415	645	595	1,240
35-39	748	828	1,576	770	860	1,630	755	835	1,590	775	725	1,500	750	705	1,455
40-44	764	829	1,593	775	885	1,660	785	875	1,660	775	855	1,630	780	735	1,515
45-49	587	627	1,214	690	730	1,420	775	895	1,670	790	885	1,675	785	865	1,650
50-54	532	515	1,047	530	575	1,105	675	745	1,420	765	890	1,655	775	880	1,655
55-59	509	540	1,049	525	500	1,025	520	580	1,100	660	735	1,395	740	875	1,615
60-64	488	553	1,041	495	565	1,060	510	490	1,000	505	575	1,080	640	730	1,370
65-69	436	533	969	465	565	1,030	465	555	1,020	485	475	960	475	565	1,040
70-74	330	392	722	345	435	780	420	540	960	395	525	920	415	460	875
75-79	215	404	619	255	400	655	285	405	690	330	490	820	320	475	795
80-84	131	321	452	140	320	460	185	335	520	205	320	525	240	390	630
85+	151	413	564	145	420	565	140	415	555	170	425	595	180	420	600
Total	9,806	10,834	20,640	10,005	10,985	20,990	10,265	11,170	21,435	10,465	11,285	21,750	10,585	11,375	21,960

Note: Numbers may not add to totals due to rounding.

Source: Hamilton-Wentworth Planning and Development Department

Table C.4

Projected Population by Five-Year Age Groups and Sex, Selected Years, 1988-2006
Flamborough

Scenario 1.2 (Medium Fertility- Medium Migration)

	Assessment			Projected Population											
	1988			1991			1996			2001			2006		
Age Group	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-4	1,062	1,033	2,095	1,075	1,030	2,105	1,035	990	2,025	1,060	1,015	2,075	1,105	1,060	2,165
5-9	1,174	1,047	2,221	1,225	1,180	2,405	1,265	1,205	2,470	1,265	1,225	2,490	1,290	1,250	2,540
10-14	1,128	1,000	2,128	1,235	1,170	2,405	1,345	1,300	2,645	1,405	1,350	2,755	1,410	1,370	2,780
15-19	1,135	970	2,105	1,120	1,010	2,130	1,285	1,120	2,405	1,375	1,335	2,710	1,455	1,400	2,855
20-24	954	894	1,848	1,000	890	1,890	1,040	945	1,985	1,180	1,015	2,195	1,280	1,245	2,525
25-29	908	923	1,831	955	885	1,840	1,015	915	1,930	985	880	1,865	1,140	985	2,125
30-34	1,086	1,190	2,276	1,155	1,195	2,350	1,185	1,120	2,305	1,230	1,130	2,360	1,210	1,110	2,320
35-39	1,196	1,173	2,369	1,245	1,340	2,585	1,370	1,410	2,780	1,470	1,410	2,880	1,525	1,430	2,955
40-44	1,113	1,077	2,190	1,255	1,250	2,505	1,345	1,445	2,790	1,575	1,620	3,195	1,690	1,636	3,326
45-49	873	848	1,721	1,035	995	2,030	1,285	1,285	2,570	1,455	1,565	3,020	1,695	1,750	3,445
50-54	738	677	1,415	775	730	1,505	1,025	990	2,015	1,305	1,320	2,625	1,485	1,600	3,085
55-59	718	634	1,352	695	655	1,350	755	720	1,475	965	950	1,915	1,245	1,280	2,525
60-64	624	620	1,244	645	595	1,240	625	610	1,235	655	645	1,300	860	875	1,735
65-69	462	488	950	495	540	1,035	535	520	1,055	510	530	1,040	545	565	1,110
70-74	326	322	648	330	335	665	375	450	825	406	425	831	405	455	860
75-79	197	191	388	225	250	475	225	260	485	260	355	615	310	365	675
80-84	95	127	222	105	120	225	130	175	305	140	190	330	170	280	450
85+	41	73	114	55	100	155	55	105	160	70	140	210	85	175	260
Total	13,830	13,287	27,117	14,625	14,270	28,895	15,895	15,565	31,460	17,311	17,100	34,411	17,700	18,831	37,736

Source: Hamilton-Wentworth Planning and Development Department

Table C.5

Projected Population by Five-Year Age Groups and Sex, Selected Years, 1988-2006
Glanbrook

Scenario 1.2 (Medium Fertility-Medium Migration)

	Assessment			Projected Population											
	1988			1991			1996			2001			2006		
Age Group	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-4	313	286	599	305	275	580	320	310	630	335	315	650	325	300	625
5-9	352	341	693	370	355	725	365	350	715	375	365	740	390	370	760
10-14	376	370	746	385	370	755	430	415	845	405	390	795	405	405	810
15-19	429	387	816	410	375	785	385	375	760	430	415	845	405	390	795
20-24	381	311	692	345	315	660	330	300	630	320	310	630	365	350	715
25-29	336	330	666	340	285	625	300	270	570	290	260	550	280	270	550
30-34	392	339	731	395	375	770	390	330	720	350	320	670	340	310	650
35-39	365	384	749	435	415	850	460	435	895	455	395	850	415	385	800
40-44	421	418	839	395	405	800	460	440	900	485	460	945	480	420	900
45-49	359	316	675	390	370	760	370	380	750	445	420	865	470	430	900
50-54	269	254	523	310	290	600	370	360	730	345	370	715	425	410	835
55-59	256	212	468	260	240	500	290	275	565	330	350	680	310	360	670
60-64	233	239	472	220	215	435	210	210	420	265	275	540	300	330	630
65-69	190	177	367	225	205	430	170	180	350	235	245	480	270	295	565
70-74	92	103	195	130	135	265	220	240	460	195	215	410	200	220	420
75-79	78	73	151	95	110	205	135	160	295	145	210	355	160	210	370
80-84	35	29	64	65	75	140	115	180	295	145	205	350	180	270	450
85+	20	27	47	55	100	155	65	135	200	115	185	300	130	200	330
Total	4,897	4,596	9,493	5,130	4,910	10,040	5,385	5,345	10,730	5,665	5,705	11,370	5,850	5,925	11,775

Source: Hamilton-Wentworth Planning and Development Department

Table C.6

Projected Population by Five-Year Age Groups and Sex,Selected Years, 1988-2006
Hamilton

Scenario 1.2 (Medium Fertility-Medium Migration)

	Assessment			Projected Population											
	1988			1991			1996			2001			2006		
Age Group	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-4	9,536	9,175	18,711	10,410	9,985	20,395	10,445	9,910	20,355	9,025	8,555	17,580	7,990	7,655	15,645
5-9	9,432	9,161	18,593	9,285	8,965	18,250	9,940	9,515	19,455	10,025	9,490	19,515	8,635	8,170	16,805
10-14	9,169	8,935	18,104	9,145	8,780	17,925	9,070	8,755	17,825	9,790	9,370	19,160	9,910	9,375	19,285
15-19	10,199	9,934	20,133	9,470	9,235	18,705	9,100	8,740	17,840	9,100	8,800	17,900	9,850	9,445	19,295
20-24	12,899	13,658	26,557	11,220	11,350	22,570	9,835	9,635	19,470	9,560	9,225	18,785	9,585	9,315	18,900
25-29	14,850	14,946	29,796	14,270	14,925	29,195	11,230	11,390	22,620	9,940	9,765	19,705	9,695	9,385	19,080
30-34	12,654	13,062	25,716	13,800	13,860	27,660	13,715	14,415	28,130	10,755	10,950	21,705	9,495	9,340	18,835
35-39	10,536	10,900	21,436	11,360	12,045	23,405	13,275	13,380	26,655	13,225	13,975	27,200	10,310	10,540	20,850
40-44	9,163	9,660	18,823	10,080	10,445	20,525	11,055	11,775	22,830	13,015	13,165	26,180	12,990	13,785	26,775
45-49	7,806	8,044	15,850	8,355	8,650	17,005	9,900	10,310	20,210	10,900	11,665	22,565	12,875	13,080	25,955
50-54	7,347	7,808	15,155	7,335	7,685	15,020	8,080	8,530	16,610	9,700	10,185	19,885	10,715	11,560	22,275
55-59	7,861	8,489	16,350	7,350	7,855	15,205	7,060	7,540	14,600	7,795	8,385	16,180	9,395	10,050	19,445
60-64	8,298	9,159	17,457	7,770	8,610	16,380	6,890	7,610	14,500	6,640	7,335	13,975	7,375	8,155	15,530
65-69	7,052	8,256	15,308	7,410	8,800	16,210	6,985	8,180	15,165	6,215	7,255	13,470	6,025	6,980	13,005
70-74	4,773	6,060	10,833	5,275	6,715	11,990	6,285	8,050	14,335	5,950	7,505	13,455	5,335	6,690	12,025
75-79	3,436	5,185	8,621	3,835	5,305	9,140	4,085	5,825	9,910	4,880	7,005	11,885	4,655	6,565	11,220
80-84	1,943	3,542	5,485	2,065	3,945	6,010	2,500	4,135	6,635	2,705	4,595	7,300	3,240	5,560	8,800
85+	1,243	2,989	4,232	1,320	3,325	4,645	1,475	3,935	5,410	1,745	4,355	6,100	2,020	4,945	6,965
Total	148,197	158,963	307,160	149,755	160,380	310,235	150,925	161,565	312,555	150,965	161,580	312,545	150,095	160,595	310,690

Source: Hamilton-Wentworth Planning and Development Department

Table C.7

Projected Population by Five-Year Age Groups and Sex, Selected Years, 1988-2006
Stoney Creek

Scenario 1.2 (Medium Fertility-Medium Migration)

	Assessment			Projected Population											
	1988			1991			1996			2001			2006		
Age Group	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-4	1,720	1,602	3,330	1,740	1,675	3,415	1,765	1,690	3,455	1,860	1,780	3,640	1,955	1,865	3,820
5-9	1,812	1,701	3,513	1,935	1,795	3,730	1,985	1,925	3,910	2,015	1,935	3,950	2,060	1,975	4,035
10-14	1,813	1,809	3,622	1,935	1,860	3,795	2,160	2,010	4,170	2,175	2,115	4,290	2,160	2,085	4,245
15-19	1,820	1,684	3,504	1,890	1,880	3,770	2,090	2,020	4,110	2,295	2,150	4,445	2,270	2,215	4,485
20-24	1,621	1,541	3,162	1,785	1,635	3,420	1,930	1,920	3,850	2,160	2,095	4,255	2,320	2,180	4,500
25-29	1,588	1,795	3,383	1,705	1,705	3,410	1,920	1,780	3,700	2,040	2,035	4,075	2,230	2,170	4,400
30-34	1,899	2,103	4,002	1,855	2,090	3,945	1,975	1,980	3,955	2,155	2,025	4,180	2,265	2,270	4,535
35-39	1,901	2,010	3,911	2,105	2,280	4,385	2,090	2,340	4,430	2,175	2,185	4,360	2,340	2,220	4,560
40-44	1,815	1,786	3,601	2,010	2,080	4,090	2,270	2,445	4,715	2,235	2,490	4,725	2,300	2,315	4,615
45-49	1,465	1,312	2,777	1,750	1,645	3,395	2,115	2,200	4,315	2,375	2,555	4,930	2,320	2,580	4,900
50-54	1,188	1,043	2,231	1,330	1,205	2,535	1,805	1,710	3,515	2,165	2,270	4,435	2,400	2,605	5,005
55-59	1,061	1,000	2,061	1,145	1,025	2,170	1,320	1,225	2,545	1,810	1,750	3,560	2,140	2,285	4,425
60-64	912	990	1,902	945	970	1,915	1,100	1,015	2,115	1,285	1,240	2,525	1,750	1,740	3,490
65-69	826	872	1,698	900	975	1,875	890	960	1,850	1,030	1,010	2,040	1,200	1,215	2,415
70-74	510	571	1,081	605	715	1,320	795	925	1,720	775	900	1,675	900	945	1,845
75-79	336	421	757	395	480	875	490	645	1,135	630	820	1,450	620	795	1,415
80-84	172	267	439	205	330	535	280	395	675	345	530	875	435	670	1,105
85+	108	247	355	115	260	375	150	335	485	200	415	615	255	540	795
Total	22,575	22,754	45,329	24,350	24,605	48,955	27,130	27,520	54,650	29,725	30,300	60,025	31,920	32,670	64,590

Source: Hamilton-Wentworth Planning and Development Department.

Appendix D

Household Projections for the Region and Area Municipalities - Five-Year Intervals

1. Hamilton-Wentworth
2. Ancaster
3. Dundas
4. Flamborough
5. Glanbrook
6. Hamilton
7. Stoney Creek

Table D.1

Calculation of Households by Age Group and Sex
Hamilton-Wentworth, 1988-2006

	1988			1991			1996			2001			2006		
	Pop.	Hr.	Hhlds.	Pop.	Hr.	Hhlds.	Pop.	Hr.	Hhlds.	Pop.	Hr.	Hhlds.	Pop.	Hr.	Hhlds.
Male															
0-14	42,317	0.0	0	43,800	0.0	0	44,900	0.0	0	44,500	0.0	0	42,500	0.0	0
15-24	32,344	13.9	4,496	30,300	13.9	4,212	29,400	13.9	4,087	30,500	13.9	4,240	31,500	13.9	4,379
25-44	66,084	76.3	50,422	69,700	76.3	53,181	70,500	76.3	53,792	70,200	76.3	53,563	66,300	76.3	50,587
45-59	33,317	88.5	29,486	34,600	88.5	30,621	39,400	88.5	34,869	45,500	88.5	40,268	52,100	88.5	46,109
60-64	11,028	89.0	9,815	10,700	89.0	9,523	10,000	89.0	8,900	10,200	89.0	9,078	12,000	89.0	10,680
65+	24,143	83.7	20,208	26,500	83.7	22,181	29,000	83.8	24,302	29,900	83.8	25,056	31,300	83.8	26,229
Total	209,233	55.6	114,426	215,600	55.6	119,717	223,200	56.0	125,949	230,800	57.8	132,204	235,500	59.1	137,983
Female															
0-14	40,593	0.0	0	41,800	0.0	0	43,000	0.0	0	42,300	0.0	0	40,500	0.0	0
15-24	32,047	10.3	3,301	29,200	10.3	3,008	28,300	10.3	2,915	28,900	10.3	2,977	30,400	10.3	3,131
25-44	68,459	24.1	16,499	72,300	24.1	17,424	72,600	24.1	17,497	69,500	24.1	16,750	65,800	24.1	15,858
45-59	33,957	22.9	7,776	35,300	22.9	8,084	40,700	22.9	9,320	48,200	22.9	11,038	55,100	22.9	12,618
60-64	12,051	30.0	3,615	11,600	30.0	3,480	10,600	30.0	3,180	10,800	30.0	3,240	12,900	30.0	3,870
65+	33,127	46.8	15,503	36,200	46.8	16,942	39,600	47.0	18,612	41,500	47.0	19,505	42,600	47.1	20,065
Total	220,234	21.2	46,694	226,400	21.6	48,937	234,800	21.9	51,524	241,200	22.2	53,509	247,400	22.5	55,542
Tot.(M+F)	429,467	37.5	161,120	442,000	38.2	168,655	458,000	38.7	177,473	472,000	39.3	185,713	483,000	40.1	193,525
Persons per hhld.			2.666			2.621			2.581			2.542			2.495

Notes: Age specific headship rates for Hamilton-Wentworth were calculated based upon 1986 Census Data

The projected population by age group and sex reflects the "most likely" scenario under Regional projections.

Source: Hamilton-Wentworth Planning and Development Department.

Table D.2

Calculation of Households by Age Group and Sex
Ancaster, 1988-2006

	1988			1991			1996			2001			2006		
	Pop.	Hr.	Hhlds.	Pop.	Hr.	Hhlds.	Pop.	Hr.	Hhlds.	Pop.	Hr.	Hhlds.	Pop.	Hr.	Hhlds.
Male															
0-14	2,459	0.0	0	2,710	0.0	0	2,975	0.0	0	3,095	0.0	0	3,360	0.0	0
15-24	1,448	2.9	42	1,610	3.1	50	2,050	3.4	70	2,555	3.7	95	2,815	3.7	104
25-44	2,890	79.0	2,283	3,310	79.4	2,628	3,645	79.7	2,905	4,125	80.0	3,300	4,705	80.0	3,764
45-59	1,748	92.1	1,610	2,020	92.1	1,860	2,850	92.1	2,625	3,655	92.3	3,374	4,205	92.3	3,881
60-64	473	93.6	443	505	93.6	473	525	93.6	491	670	94.0	630	925	94.0	870
65+	943	87.6	826	1,100	87.6	964	1,320	87.6	1,156	1,510	88.0	1,329	1,755	88.0	1,544
Total	9,961	52.5	5,230	11,255	53.1	5,975	13,365	54.2	7,247	15,610	55.9	8,727	17,765	57.2	10,163
Female															
0-14	2,224	0.0	0	2,530	0.0	0	2,865	0.0	0	3,020	0.0	0	3,260	0.0	0
15-24	1,297	1.2	16	1,435	1.4	20	1,855	1.7	32	2,400	2.3	55	2,740	2.3	63
25-44	3,130	12.0	376	3,485	12.1	422	3,755	12.2	458	3,985	12.6	502	4,390	12.6	553
45-59	1,638	12.5	205	1,975	12.7	251	2,830	12.9	365	3,860	13.4	517	4,522	13.4	606
60-64	490	16.5	81	505	16.7	84	545	16.8	92	660	17.3	114	970	17.2	167
65+	988	35.6	352	1,195	35.6	425	1,515	35.6	539	1,825	35.9	655	2,150	35.8	770
Total	9,767	10.5	1,028	11,125	10.8	1,202	13,365	11.1	1,486	15,750	11.7	1,844	18,032	12.0	2,159
Tot.(M+F)	19,728	31.7	6,258	22,380	32.1	7,177	26,730	32.7	8,733	31,360	33.7	10,571	35,797	33.9	12,322
Persons per hhld.			3.152			3.118			3.061			2.967			2.905

Source: Hamilton-Wentworth Planning and Development Department

Table D.3

Calculation of Households by Age Group and Sex
Dundas, 1988-2006

	1988			1991			1996			2001			2006		
	Pop.	Hr.	Hhld.	Pop.	Hr.	Hhld.	Pop.	Hr.	Hhld.	Pop.	Hr.	Hhld.	Pop.	Hr.	Hhld.
Male															
0-14	1,998	0.0	0	2,030	0.0	0	1,955	0.0	0	1,890	0.0	0	1,835	0.0	0
15-24	1,458	8.3	121	1,400	8.3	116	1,355	8.3	112	1,365	8.4	115	1,365	8.4	115
25-44	2,971	77.0	2,288	2,985	77.5	2,313	2,980	77.6	2,312	2,905	77.9	2,263	2,815	77.9	2,193
45-59	1,628	89.6	1,459	1,745	89.7	1,565	1,970	89.7	1,767	2,215	89.9	1,991	2,300	89.9	2,068
60-64	488	91.3	446	495	91.3	452	510	91.3	466	505	91.4	462	640	91.4	585
65+	1,263	76.7	969	1,350	77.5	1,046	1,495	77.6	1,160	1,585	77.9	1,235	1,630	77.9	1,270
Total	9,806	53.9	5,282	10,005	54.9	5,493	10,265	56.7	5,818	10,465	58.0	6,065	10,585	58.9	6,230
Female															
0-14	1,932	0.0	0	1,950	0.0	0	1,880	0.0	0	1,805	0.0	0	1,750	0.0	0
15-24	1,371	6.2	85	1,305	6.2	81	1,270	6.5	83	1,320	6.7	88	1,315	6.7	88
25-44	3,233	23.7	766	3,220	23.8	766	3,060	23.9	731	2,840	24.3	690	2,650	24.3	644
45-59	1,682	20.3	341	1,805	20.3	366	2,220	20.4	453	2,510	20.8	522	2,620	20.8	545
60-64	553	26.1	144	565	27.1	153	490	27.5	135	575	27.8	160	730	27.8	203
65+	2,063	33.9	699	2,140	34.7	743	2,250	34.9	785	2,235	35.5	793	2,310	35.5	820
Total	10,834	18.8	2,036	10,985	19.2	2,109	11,170	19.6	2,187	11,285	20.0	2,254	11,375	20.2	2,300
Tot.(M+F)	20,640	35.5	7,318	20,990	36.2	7,602	21,435	37.3	8,005	21,750	38.2	8,319	21,960	38.8	8,530
Persons per hhld.			2.820			2.761			2.678			2.614			2.574

Source: Hamilton-Wentworth Planning and Development Department, 1988

Table D.4

Calculation of Households by Age Group and Sex
Flamborough, 1988-2006

	1988			1991			1996			2001			2006		
	Pop.	Hr.	Hhlds.	Pop.	Hr.	Hhlds.	Pop.	Hr.	Hhlds.	Pop.	Hr.	Hhlds.	Pop.	Hr.	Hhlds.
Male															
0-14	3,364	0.0	0	3,535	0.0	0	3,645	0.0	0	3,730	0.0	0	3,805	0.0	0
15-24	2,089	6.1	127	2,120	6.3	134	2,325	6.5	151	2,555	6.7	171	2,735	7.0	191
25-44	4,303	78.5	3,378	4,610	78.7	3,628	4,915	79.3	3,898	5,260	79.5	4,182	5,565	79.7	4,435
45-59	2,329	89.6	2,087	2,505	89.9	2,252	3,065	90.2	2,765	3,725	91.7	3,416	4,425	91.9	4,067
60-64	624	88.8	554	645	89.1	575	625	89.5	559	655	89.8	588	860	90.0	774
65+	1,121	86.0	964	1,210	86.3	1,044	1,320	86.7	1,144	1,386	86.8	1,203	1,515	87.0	1,318
Total	13,830	51.4	7,110	14,625	52.2	7,633	15,895	53.6	8,517	17,311	55.2	9,560	18,905	57.1	10,785
Female															
0-14	3,080	0.0	0	3,380	0.0	0	3,495	0.0	0	3,590	0.0	0	3,680	0.0	0
15-24	1,864	3.0	56	1,900	3.3	63	2,065	3.5	72	2,350	4.1	96	2,645	4.1	108
25-44	4,363	14.7	641	4,670	15.0	701	4,890	15.2	743	5,040	15.5	781	5,161	15.5	800
45-59	2,159	13.7	296	2,380	14.0	333	2,995	14.2	425	3,835	14.5	556	4,630	14.6	676
60-64	620	19.0	118	595	19.4	115	610	19.7	120	645	20.0	129	875	20.2	177
65+	1,201	37.5	450	1,345	37.8	508	1,510	38.1	575	1,640	38.3	628	1,840	38.4	707
Total	13,287	11.8	1,561	14,270	12.1	1,720	15,565	12.4	1,936	17,100	12.8	2,191	18,831	13.1	2,468
Tot.(M+F)	27,117	32.0	8,671	28,895	32.4	9,353	31,460	33.2	10,453	34,411	34.1	11,751	37,736	35.1	13,253
Persons per hhld.			3.127			3.089			3.010			2.928			2.847

Source: Hamilton-Wentworth Planning and Development Department, 1988

Table D.5

Calculation of Households by Age Group and Sex
Glanbrook, 1988-2006

	1988			1991			1996			2001			2006		
	Pop.	Hr.	Hhlds.	Pop.	Hr.	Hhlds.	Pop.	Hr.	Hhlds.	Pop.	Hr.	Hhlds.	Pop.	Hr.	Hhlds.
Male															
0-14	1,041	0.0	0	1,060	0.0	0	1,115	0.0	0	1,115	0.0	0	1,120	0.0	0
15-24	810	4.9	40	755	4.9	37	715	5.1	36	750	6.0	45	770	6.0	46
25-44	1,514	77.4	1,172	1,565	77.6	1,214	1,610	78.2	1,259	1,580	78.9	1,247	1,515	78.9	1,195
45-59	884	89.6	792	960	90.0	864	1,030	90.3	930	1,120	90.6	1,015	1,205	90.6	1,092
60-64	233	92.2	215	220	93.0	205	210	93.3	196	265	92.4	245	300	92.5	278
65+	415	91.5	380	570	92.0	524	705	93.4	658	835	91.8	767	940	91.8	863
Total	4,897	53.1	2,598	5,130	55.4	2,844	5,385	57.2	3,080	5,665	58.6	3,318	5,850	59.4	3,474
Female															
0-14	997	0.0	0	1,000	0.0	0	1,075	0.0	0	1,070	0.0	0	1,075	0.0	0
15-24	698	2.8	20	690	2.8	19	675	3.0	20	725	3.2	23	740	3.2	24
25-44	1,471	10.4	153	1,480	10.4	154	1,475	11.0	162	1,435	11.1	159	1,385	11.1	154
45-59	782	11.5	90	900	11.5	104	1,015	11.6	118	1,140	11.7	133	1,200	11.7	140
60-64	239	17.4	42	215	18.5	40	210	19.5	41	275	18.1	50	330	18.3	60
65+	409	35.2	144	625	46.3	289	895	59.1	529	1,060	65.0	689	1,195	66.0	789
Total	4,596	9.7	448	4,910	12.3	606	5,345	16.3	870	5,705	18.5	1,055	5,925	19.7	1,167
Tot.(M+F)	9,493	32.1	3,046	10,040	34.4	3,450	10,730	36.8	3,950	11,370	38.5	4,372	11,775	39.4	4,641
Persons per hhld.			3.116			2.910			2.716			2.600			2.537

Source: Hamilton-Wentworth Planning and Development Department.

Table D.6

Calculation of Households by Age Group and Sex
Hamilton, 1988-2006

	1988			1991			1996			2001			2006		
	Pop.	Hr.	Hhld.	Pop.	Hr.	Hhld.	Pop.	Hr.	Hhld.	Pop.	Hr.	Hhld.	Pop.	Hr.	Hhld.
Male															
0-14	28,137	0.0	0	28,840	0.0	0	29,455	0.0	0	28,840	0.0	0	26,535	0.0	0
15-24	23,098	16.6	3,834	20,690	16.7	3,455	18,935	16.7	3,162	18,660	16.8	3,135	19,435	17.0	3,304
25-44	47,203	75.2	35,497	49,510	75.3	37,281	49,275	75.5	37,203	46,935	76.1	35,718	42,490	76.2	32,377
45-59	23,014	87.6	20,160	23,040	87.7	20,206	25,040	87.8	21,985	28,395	88.1	25,016	32,985	88.4	29,159
60-64	8,298	88.3	7,327	7,770	88.4	6,869	6,890	88.5	6,098	6,640	88.6	5,883	7,375	88.6	6,534
65+	18,447	83.8	15,459	19,905	83.9	16,700	21,330	84.0	17,917	21,495	84.2	18,099	21,275	84.2	17,914
Total	148,197	55.5	82,277	149,755	56.5	84,511	150,925	57.5	86,365	150,965	58.7	87,850	150,095	60.1	89,288
Female															
0-14	27,271	0.0	0	27,730	0.0	0	28,180	0.0	0	27,415	0.0	0	25,200	0.0	0
15-24	23,592	12.5	2,949	20,585	12.6	2,594	18,375	12.7	2,334	18,025	12.8	2,307	18,760	13.1	2,458
25-44	48,568	27.9	13,550	51,275	28.0	14,357	50,960	28.1	14,320	47,855	28.2	13,495	43,050	28.4	12,226
45-59	24,341	25.8	6,280	24,190	25.9	6,265	26,380	25.9	6,832	30,235	26.0	7,861	34,690	26.3	9,123
60-64	9,159	32.8	3,004	8,610	32.9	2,833	7,610	33.0	2,511	7,335	33.2	2,435	8,155	33.3	2,716
65+	26,032	49.7	12,938	28,090	49.9	14,017	30,125	49.9	15,032	30,715	50.0	15,358	30,740	50.0	15,370
Total	158,963	24.4	38,722	160,480	25.0	40,066	161,630	25.5	41,029	161,580	25.8	41,456	160,595	26.2	41,893
Tot.(M+F)	307,160		120,998	310,235		124,577	312,555		127,394	312,545		129,306	310,690		131,181
Persons per hhld.			2.539			2.490			2.453			2.417			2.368

Source: Hamilton-Wentworth Planning and Development Department, 1988.

Table D.7

Calculation of Households by Age Group and Sex
Stoney Creek, 1988-2006

	1988			1991			1996			2001			2006		
	Pop.	Hr.	Hhlds.	Pop.	Hr.	Hhlds.	Pop.	Hr.	Hhlds.	Pop.	Hr.	Hhlds.	Pop.	Hr.	Hhlds.
Male															
0-14	5,353	0.0	0	5,610	0.0	0	5,910	0.0	0	6,050	0.0	0	6,175	0.0	0
15-24	3,441	7.9	272	3,675	8.3	305	4,020	8.3	334	4,455	8.3	370	4,590	8.4	386
25-44	7,203	81.4	5,863	7,675	82.0	6,294	8,255	82.0	6,769	8,605	82.0	7,056	9,135	82.4	7,527
45-59	3,714	91.6	3,402	4,225	92.0	3,887	5,240	92.1	4,826	6,350	92.4	5,867	6,860	92.4	6,339
60-64	912	91.3	833	945	91.7	867	1,100	91.7	1,009	1,285	91.8	1,180	1,750	91.9	1,608
65+	1,952	82.6	1,612	2,220	82.8	1,838	2,605	82.4	2,147	2,980	82.6	2,461	3,410	82.6	2,817
Total	22,575	53.1	11,982	24,350	54.2	13,190	27,130	55.6	15,084	29,725	57.0	16,934	31,920	58.5	18,676
Female															
0-14	5,112	0.0	0	5,330	0.0	0	5,625	0.0	0	5,830	0.0	0	5,925	0.0	0
15-24	3,225	3.9	126	3,515	4.1	144	3,940	4.2	165	4,245	4.2	178	4,395	4.4	193
25-44	7,694	13.7	1,054	8,155	14.5	1,182	8,545	14.5	1,239	8,735	14.4	1,258	8,975	14.6	1,310
45-59	3,355	15.2	510	3,875	15.7	608	5,135	15.8	811	6,575	15.7	1,032	7,470	15.9	1,188
60-64	990	23.0	228	970	25.0	243	1,015	24.3	247	1,240	26.0	322	1,740	26.0	452
65+	2,378	36.0	856	2,760	39.0	1,076	3,260	40.0	1,304	3,675	42.0	1,544	4,165	42.0	1,749
Total	22,754	12.2	2,774	24,605	13.2	3,254	27,520	13.7	3,766	30,300	14.3	4,334	32,670	15.0	4,893
Tot.(M+F)	45,329	32.6	14,756	48,955	33.6	16,444	54,650	34.5	18,851	60,025	35.4	21,269	64,590	36.5	23,570
Persons per hhld.			3.072			2.977			2.899			2.822			2.740

Source: Hamilton-Wentworth Planning and Development Department.